

SAFETY DATA SHEET

Vacuum Pump Oil

Date of Preparation: 07/01/2014

SDS #: 004-16003-01MSDS

SECTION 1: IDENTIFICATION

Product Identification: Vacuum Pump Oil

Chemical Formula: $(CH_2)_n$ $20 \leq n \leq 40$

CAS Number: 8042-47-5

Other Designations: None

Volumes: 1 L

Recommended Use: Mineral filler and pigment

Restrictions: For laboratory use only.

Supplier Information:

Micromeritics Instrument Corp.
4356 Communications Drive
Norcross, GA 30093-2901 USA

Contact: Human Resources
Phone: (770) 662-3620
Fax: (770) 662-3696

Manufacturer: Inland Vacuum Industries, Churchville, NY 14428 (716) 293-3330 **Emergency Phone:** (800) 424-9300 (Chemtrex)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification: Category 5 Acute Toxicity: Oral/Inhalation

Signal word: None

Hazard Statements:

H303: May be harmful if swallowed

H316: Causes mild skin irritation

Pictograms: Not applicable

Precautionary Statements:

P280: Wear protective gloves/protective clothing/eye protection/face protection

P302+350: IF ON SKIN: Gently wash with soap and water

Primary Entry Routes: Ingestion, inhalation of oil mists. This product is not classified as hazardous.

Target Organs:

Acute Effects: Exposure to oils mists may cause nausea and eye irritation. Detailed studies have not been made, but material is not expected to be dermatitic or a sensitizer.

Inhalation: Not applicable

Eye: Exposure to oil mists may cause eye irritation.

Skin: Not applicable

Ingestion: Exposure to oil mists may cause nausea.

Carcinogenicity: IARC, NTP, and OSHA do not list chemical as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: Not applicable

Chronic Effects: Unknown

Note : This information is based on test data from similar products.

This product is not formulated to contain ingredients which have exposure limits established by regulatory agencies. It is not hazardous to health as defined by the European Union Dangerous Substances/Preparations Directives. Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient Name | CAS Number | % wt or % vol. |
|--|------------|----------------|
| 100% solvent refined technical white petroleum oil | 8042-47-5 | 100 |

Trace Impurities:

| Ingredient | OSHA PEL | | ACGIH TLV | | NIOSH REL | | NIOSH |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | TWA | STEL | TWA | STEL | TWA | STEL | IDLH |
| 100% Solvent refined technical white petroleum oil. | none estab. | none estab. | none estab. | none estab. | none estab. | none estab. | none estab. |

SECTION 4: FIRST-AID MEASURES

Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Eye Contact: Flush thoroughly with water. If irritation occurs, get medical assistance.

Skin Contact: Wash with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops get medical attention.

Ingestion: First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5: FIRE-FIGHTING MEASURES

Flammability Classification: 1

Extinguishing Media: Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames. Inappropriate Extinguishing Media: Straight streams of water

Unusual Fire or Explosion Hazards: None

Hazardous Combustion Products: Not applicable.

Fire-Fighting Instructions: Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Smoke, Fume, Carbon Monoxide, Aldehydes

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill/Leak procedures: Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent. Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants. Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

Environmental Precautions: Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7: HANDLING AND STORAGE

Handling Precautions: Prevent small spills and leakage to avoid slip hazard. Static Accumulator: This material is a static accumulator.

Handling Description: Do not store in open or unlabeled containers.

Storage Precautions: Store in agreement with local regulations. Store in original container protected from direct sunlight in a cool, dry, and well-ventilated area, away from incompatible materials (see section 10) and food and drink.

Storage Criteria: Chemical storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL.

Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s)

Engineering Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: No special requirements under ordinary conditions of use and with adequate ventilation

Personal Protection: Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Ventilation: Use a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.

Personal Protective Equipment:

Eye/Face Protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection: No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

General Considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: >243°C)

Flash Point Method: COC

Burning Rate: N/A

Autoignition Temperature: N/A

LEL: Unknown

UEL: Unknown

Physical State: Liquid
Appearance: Transparent, colorless
Odor: Faint petroleum odor
Vapor Pressure: < .0001 Torr @25°C
Vapor Density (Air=1): Approx. 14
Formula Weight: N/A
Density: N/A
Specific Gravity 0.86
pH: NDA

Solubility: Not water soluble
Other Solubilities: N/A
Boiling Point: >300°C
Freezing/Melting Point: NDA
Viscosity: 65 cst @ 40°C
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate: N/A

SECTION 10: STABILITY AND REACTIVITY

Stability: VACUUM PUMP OIL (1- L) is stable.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Strong oxidizers.

Conditions to Avoid: Continuous exposure to temperatures > 200°C

Hazardous Decomposition Products: Incomplete combustion may produce carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Potential acute health effects

Inhalation: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

Eye contact: No known significant effects or critical hazards.

PRODUCT

Route of Exposure

INHALATION

Toxicity: LC50 > 5000 mg/m3

Irritation: No end point data.

INGESTION

Toxicity: LD50 > 5000 mg/kg

Skin

Toxicity: LD50 > 5000 mg/kg

Irritation: Data available.

Conclusion / Remarks

Minimally Toxic. Based on test data for structurally similar materials.

Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.

Minimally Toxic. Based on test data for structurally similar materials.

Minimally Toxic. Based on test data for structurally similar materials.

Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.

Eye

Irritation: Data available.

May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS**For the product itself:**

Repeated and/or prolonged exposure may cause irritation to the skin, eyes, or respiratory tract.

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

CARCINOGENIC EFFECTS:

Contains no carcinogens. Similar compounds essentially non-toxic. No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA), NTP or IARC.

Although there is no specific test data on all the base oil components, the mineral base oil would not be expected to exhibit carcinogenic potential based on what is known of the toxicity of mineral base oils in general.

The DMSO extract by IP 346 of the oil is less than 3%. (Typical 0.2% with Maximum 0.5%) Consequently it is not classified as a carcinogen.

The base oil in this product is severely hydro-treated by all hydro-processing route. By this refining history would be showed no evidence of carcinogenic potential.

MUTAGENIC EFFECTS: No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.

TERATOGENIC EFFECTS/DEVELOPMENTAL TOXICITY: No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.

REPRODUCTION TOXICITY: No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a reproductive toxin.

SECTION 12: ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity: Material -- Not expected to be harmful to aquatic organisms.

Mobility: Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

Persistence and biodegradability: Biodegradation: Base oil component -- Expected to be inherently biodegradable

Bioaccumulation potential: Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

Care should be taken to minimize release of this product into the environment

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

European Waste Code: 13 01 10

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

This material is considered as hazardous waste pursuant to Directive 91/689/EEC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies.

Empty Container Warning: Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14: TRANSPORT INFORMATION

DOT Transportation Data (49 CFR 172.101):

WWW.MICROMERITICS.COM | 4356 COMMUNICATIONS DRIVE, NORCROSS, GA 30093 | 770-662-3636

Shipping Name: Not regulated
Shipping Symbols: Not Applicable
Hazard Class: Not regulated
ID No.: Not regulated
Packing Group: Not Applicable
Label: Not Applicable
Special Provisions (172.102):
Not Applicable

Packaging Authorizations

- a) **Exceptions:** Not Applicable
- b) **Non-bulk Packaging:** Not Applicable
- c) **Bulk Packaging:** Not Applicable

Quantity Limitations

- a) **Passenger, Aircraft, or Railcar:** Not Applicable
- b) **Cargo Aircraft Only:** Not Applicable

Vessel Stowage Requirements

- a) **Vessel Stowage:** Not Applicable
- b) **Other:** Not Applicable

SECTION 15: REGULATORY INFORMATION

Europe

Material is not dangerous as defined by the EU Dangerous Substances/Preparations Directives.

EU LABELING: Not regulated according to EC Directives Material is not dangerous as defined by the EU Dangerous

Substances/Preparations Directives.

Classification and labeling have been performed according to EU Directives 67/548/EEC, 1999/45/EC and 2001/58/EC (including amendments) and the intended use. - Consumer applications.

United States

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances: None.

Section 304 CERCLA Hazardous Substances: None.

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Canada WHMIS (Canadian Workplace Hazardous Materials Information System)

This product when tested as a whole is not a controlled substance within the meaning of the Hazardous Products Act.

Germany: Water Hazardous Class (WGK): 1 (low hazard to water)

NATIONAL LEGISLATION / REGULATIONS

Ozone depleting chemicals: No ozone depleting chemicals are present or used in manufacture.

SECTION 16: OTHER INFORMATION

Prepared By: Zuniga, A.

Revision Notes: Not Applicable

Additional Hazard Rating Systems: Not Applicable

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