

Material Safety Data Sheet

HE-200

MSDS No.

Date of Preparation: 03/00

Mod. 2/28/02

Revision: 1

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: HE200 Vacuum Pump Fluid

Chemical Formula:

CAS Number: Mixture

Other Designations: High Vacuum Pump Oil; Lubricating Oil.

General Use: Lubrication

Manufacturer: Kurt J. Lesker Co. 1515 Worthington Ave. Clairton, PA 15025 Phone: (412)233-4200 Spill Emergency - CHEMTREC 800-424-9300

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
Highly-Refined Petroleum Lubricant Oils	64741-88-4	100

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
	5 mg/m ³	none estab.	5 mg/m ³	10 mg/m ³	5 mg/m ³	10 mg/m ³	none estab.

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS
H 0
F 1
R 0
PPE†
†Sec. 8

Potential Health Effects

Primary Entry Routes: Skin Contact

Target Organs: Skin

Acute Effects

Inhalation: No significant adverse health effects are expected to occur upon short-term exposure to this product. Aspiration of liquid into the lungs can cause severe lung damage or death.

Eye: Minimal eye irritation may result from short-term contact with liquid, mist and/or vapor.

Skin: This material can cause mild skin irritation from prolonged or repeated contact. Injection under the skin, in muscle, or in the blood stream can cause irritation, inflammation, swelling, fever, and systemic effects and mild CNS depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention.

Ingestion: If swallowed in quantities greater than one teaspoon, this material can cause a laxative effect.

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

Medical Conditions Aggravated by Long-Term Exposure:

Chronic Effects: Prolonged or repeated contact can cause mild skin irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne.

Section 4 - First Aid Measures

Inhalation: Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.

Eye Contact: Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.

Skin Contact: Remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with soap and water.

Seek medical attention if tissue appears damaged or if irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under the skin, into muscle, or into bloodstream, seek medical attention immediately.

Ingestion: Do not induce vomiting unless directed by a physician. Do not give anything to drink unless directed by physician. Never give anything by mouth to a person who is not fully conscious. If large amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: The viscosity range of the product(s) represented by this MSDS is 100 to 400 SUS at 100°F. Accordingly, upon ingestion, there is a low to moderate risk of aspiration. Careful gastric lavage may be considered to evacuate large quantities of material. Subcutaneous or intramuscular injection requires prompt surgical debridement.

Special Precautions/Procedures:

Section 5 - Fire-Fighting Measures

Flash Point: 410 °F (210 °C)

Flash Point Method: CC

Burning Rate: N/A

Autoignition Temperature: N/A

LEL: N/A

UEL: N/A

Flammability Classification: OSHA/NFPA Class IIIB combustible liquid. Slightly combustible.

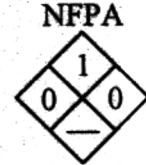
Extinguishing Media: Use dry chemical, foam, Carbon Dioxide, or water fog.

Unusual Fire or Explosion Hazards: When heated above its flash point temperature, this material will release vapors which, if exposed to an ignition source, can ignite. In closed spaces vapors can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

Hazardous Combustion Products: Carbon Dioxide, Carbon Monoxide, smoke, fumes and unburned hydrocarbons.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.



Section 6 - Accidental Release Measures

Spill /Leak Procedures: Take proper precautions to ensure your own safety before attempting spill control or clean up.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk

Small Spills: For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal.

Large Spills: Contain large spills to maximize product recovery or disposal. Prevent entryway into waterways or sewers. In urban area, clean up spill as soon as possible. In natural environments, seek clean up advice from specialist to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: (See above paragraph)

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid water contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind, or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state, or local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage Requirements: Kepp container closed. Do not store with strong oxidizing agents. Do not store at temperatures above 120°F or in direct sunlight for extended periods of time. Consult appropriate federal, state, or local authorities before reusing, reclaiming, recycling or disposing of empty containers or waste residues of this product.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. An eye wash station and safety shower should be located near the work station.

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Respiratory Protection: Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134)

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Light amber, mild petroleum odor

Odor Threshold:

Vapor Pressure: <1 mm Hg at 20 °C

Vapor Density (Air=1): >1

Formula Weight:

Density:

Specific Gravity (H₂O=1, at 4 °C): 0.88

pH: N/A

Water Solubility: Insoluble in cold water

Other Solubilities:

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Viscosity: 64 cSt @ 40°C

Refractive Index:

Surface Tension:

% Volatile:

Evaporation Rate:

Section 10 - Stability and Reactivity

Stability: HE-200 is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization is not expected to occur.

Chemical Incompatibilities: Oxidizing materials

Conditions to Avoid: Keep away from extreme heat, sparks, open flame and strongly oxidizing conditions.

Hazardous Decomposition Products: Thermal oxidative decomposition of product can produce CO and CO₂.

Section 11- Toxicological Information

Toxicity Data:

Eye Effects:

Acute Inhalation Effects:

Human, inhalation, TC_{Lo}: ?? ppm

Skin Effects:

Acute Oral Effects:

Rat, oral, LD₅₀: >5000 mg/kg

Chronic Effects:

Carcinogenicity:

Mutagenicity:

Teratogenicity:

Highly-Refined Petroleum Lubricant Oils: Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short term repeated exposures to high concentrations of mineral oil mists well above workplace exposure levels include lung inflammatory reaction, lipid granuloma formation and lipid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current workplace exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

Section 12 - Ecological Information

Ecotoxicity: Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental Fate: Ecological effects testing has not been conducted on this product. However, plants and animals may experience harmful or fatal effects when coated with petroleum based products. Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause fish kill or create an anaerobic environment.

Section 13 - Disposal Considerations

Disposal: Hazard characteristics and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent material and residues at the time of disposition. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements:

Container Cleaning and Disposal:

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: N/A

Shipping Symbols: N/A

Hazard Class: N/A

ID No.: N/A

Packing Group: N/A

Label: N/A

Special Provisions (172.102):

Packaging Authorizations

a) Exceptions: N/A

b) Non-bulk Packaging: N/A

c) Bulk Packaging: N/A

Quantity Limitations

a) Passenger, Aircraft, or Railcar: N/A

b) Cargo Aircraft Only: N/A

Vessel Stowage Requirements

a) Vessel Stowage: N/A

b) Other: N/A

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) listed/unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ), N/A

SARA 311/312 Codes: N/A

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance

State Regulations:

Section 16 - Other Information

Revision Notes:

Additional Hazard Rating Systems:

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