SAFETY DATA SHEET

Date Issued: 7/5/2012 MSDS No: F-3000-170 Date Revised: 3/11/2013

Revision No: 2

Permavis 10

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Permavis 10
GENERAL USE: Vacuum Pump Fluid
GENERIC NAME: PV 10, Polyalphaolefins

ALTERNATE TRADE NAME(S) / PRODUCT CODE(S): PV10CA, PV10CP, PV10DD, PV10Q1

MANUFACTURER

Kurt J Lesker Company United States 1925 Route 51 Jefferson Hills, PA 15025

Customer Service: 412-387-9200

E-Mail: msds@lesker.com

Kurt J Lesker Company LTD United Kingdom

15-16 Burgess Road Hastings, East Sussex, TN35 4NR

naland

Customer Service: +44 (0) 1424 458100

24 HR. EMERGENCY TELEPHONE NUMBERS

24-Hour Emergency Response provided by 3E Global Incident Response Hotline

When calling, refer to Kurt J Lesker Company Global Response Access Code: 333594

North America [USA, Canada, Mexico]: 1-866-519-

4752

Mainland China: (+86) 4001 2001 74 Europe: {int'l call prefix}-1-760-476-3961 Asia Pacific: {int'l call prefix}-1-760-476-3960 Middle East & Africa: {int'l call prefix}-1-760-476-

3959

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Environmental:

Chronic Hazards to the Aquatic Environment, Category 3

GHS LABEL

HAZARD STATEMENTS

H412: Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENT(S)

Prevention:

P273: Avoid release to the environment.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear liquid

POTENTIAL HEALTH EFFECTS

EYES: Contact may cause eye irritation.

SKIN: May cause skin irritation.

SKIN ABSORPTION: May be harmful in contact with skin.

INGESTION: May be harmful if swallowed.

INHALATION: May be harmful if inhaled.

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Available **TERATOGENIC EFFECTS:** Not Available

CARCINOGENICITY: Not listed as a human carcinogen

MUTAGENICITY: Not Available

ROUTES OF ENTRY: Inhalation, ingestion, eye contact, or skin contact.

SENSITIZATION: None expected.

PHYSICAL HAZARDS: This substance is not considered hazardous in the form supplied.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
1-Decene, homopolymer, hydrogenated	> 99	68037-01-4

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Rinse mouth. Get medical advice/attention.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

SKIN: General observations of persons occupationally exposed to lubricants or mineral oils or products based on these oils indicate that higher viscosity oils can block skin pores causing an acne-like disorder. In addition, the oils or certain additives or imputites in the oils, as well as mechanical irritation from contaminants in oil based products, may cause dry cracked irritated skin (dermatitis).

The International Petroleum Industry Environmental Conservation Association (IPIECA) advises that there is sufficient read-across data to assess the skin irritancy hazard of most petroleum substances (hydrocarbons in general) may cause defatting of the skin, leading to skin dryness and cracking. It is advised to include approprite warnings on the SDS.

ACUTE TOXICITY: Poses little or no immediate hazard.

CHRONIC EFFECTS: Not Available

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Combustible.

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spills immediately, observing precautions in Protective Equipment section.

LARGE SPILL: Collect spilled material in appropriate container. Spill may be reportable. Consult section 15 for Reportable Quantities.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

GENERAL PROCEDURES: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all ignition sources if safe to do so. Avoid formation of dust. Provide appropriate exhaust ventilation where dust is formed. Avoid breathing (dust, vapor, mist, gas). Practice good chemical hygiene during and after use. Avoid release to the environment.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: To avoid risks to human health and the environment, comply with the instructions for

HANDLING: Keep away from heat and flame. Keep container closed when not in use. Remove contaminated clothing and wash before reuse. Wash hands before eating and wash before reuse. Wash thoroughly after handling.

STORAGE: Keep container closed when not in use. Store in a cool dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses.

SKIN: Wear protective gloves.

RESPIRATORY: Not normally needed. If ventilation is inadequate and this material is handled at elevated temperatures or dusts/fumes/mists are generated a NIOSH/MSHA approved air purifying respirator with a manufacturers approved cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

WORK HYGIENIC PRACTICES: Practice good chemical hygiene during and after use.

COMMENTS: There are no established workplace exposure limits for components of this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: None **COLOR:** Clear pH: Not Available

PERCENT VOLATILE: Not Available

FLASH POINT AND METHOD: 260°C (Closed cup)

AUTOIGNITION TEMPERATURE: Not Available

VAPOR PRESSURE: < 133 Pa at 20°C

VAPOR DENSITY: Not Available **BOILING POINT:** Not Available

POUR POINT: -45°C

SOLUBILITY IN WATER: Negligible

SPECIFIC GRAVITY: 0.84

VISCOSITY #1: 9.4 to 10.2 cSt at (100°F)

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides

INCOMPATIBLE MATERIALS: Strong acids, Oxidizing materials, Halogens.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: Not Available

SKIN ABSORPTION: Not Available

ORAL LD₅₀: Not Available

INHALATION LC₅₀: Not Available

CARCINOGENICITY

IARC: Not listed
NTP: Not listed
OSHA: Not listed

REPRODUCTIVE EFFECTS: Not Available **TERATOGENIC EFFECTS:** Not Available

MUTAGENICITY: Not Available

12. ECOLOGICAL INFORMATION

BIOACCUMULATION/ACCUMULATION: Not Available

AQUATIC TOXICITY (ACUTE): Not Available **CHEMICAL FATE INFORMATION:** Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of according to applicable federal, state, provincial, and local regulations.

PRODUCT DISPOSAL: Contact a licensed waste disposal company.

EMPTY CONTAINER: Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not Regulated

AIR (ICAO/IATA)

SHIPPING NAME: Not Regulated

VESSEL (IMO/IMDG)

SHIPPING NAME: Not Regulated

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not Regulated

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All components of this product are included in inventory, exempt, or notified

REGULATIONS

STATE REGULATIONS: Not listed

CALIFORNIA PROPOSITION 65: This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Not Regulated

DOMESTIC SUBSTANCE LIST (INVENTORY): All components of this product are included in inventory, exempt, or notified

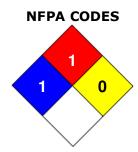
16. OTHER INFORMATION

APPROVED BY: EHS DEPT
PREPARED BY: E Bolton

INFORMATION CONTACT: msds@lesker.com

REVISION SUMMARY: This MSDS replaces the 11/8/2012 MSDS.

HMIS RATING HEALTH 1 FLAMMABILITY 1 PHYSICAL HAZARD 0



GENERAL STATEMENTS: The physical and toxicological properties of this material have not been thoroughly investigated.

MANUFACTURER DISCLAIMER:

PERSONAL PROTECTION

Kurt J. Lesker Company ("KJLC") believes the information contained in this Material Safety Data Sheet is accurate as of the "Date of Last Revision" specified. The information relates only to typical properties of the product. Do not use the information for product performance or specification purposes. The information is for use by technically skilled persons at their own risk. KJLC MAKES NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE PRODUCT OR THE INFORMATION. The information may not be valid for product use in combination with any other product or material or in any process. KJLC expressly disclaims any liability arising from any use of the product or any reliance on the information. Do not treat the information (a) as assurance that use of the product will not infringe patent or other rights or (b) as a license or grant of patent or other property rights. "KJLC" means KJLC and each of its subsidiaries.