



## SAFETY DATA SHEET

### Permavis 10

#### 1. Identification

##### Product identifier

**Product name** Permavis 10

**Internal identification** Replaces F-3000-170

**Synonyms; trade names** PAO

##### Recommended use of the chemical and restrictions on use

**Application** Vacuum pump lubricant

**Uses advised against** This product is designed for use by technically competent persons. Any use of this product, other than for its stated use, should not be attempted without expert review.

##### Details of the supplier of the safety data sheet

**Supplier** Kurt J Lesker Company

**Manufacturer** Kurt J Lesker Company  
1925 Route 51  
Jefferson Hills, PA 15025  
+1 412-387-9200

Kurt J Lesker Company LTD  
United Kingdom  
15-16 Burgess Road  
Hastings, East Sussex, TN35 4NR  
England  
Customer Service: +44 (0) 1424 458100  
msds@lesker.com

##### Emergency telephone number

**Emergency telephone** 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. Hazard(s) identification

##### Classification of the substance or mixture

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H302

**Environmental hazards** Aquatic Chronic 3 - H412

##### Label elements

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### Pictogram



|                                 |   |
|---------------------------------|---|
| <b>Signal word</b>              | Warning   |
| <b>Hazard statements</b>        | H302 Harmful if swallowed.<br>H412 Harmful to aquatic life with long lasting effects.   |
| <b>Precautionary statements</b> | P264 Wash contaminated skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P273 Avoid release to the environment.<br>P301+P312 If swallowed: Call a poison center/ doctor if you feel unwell.<br>P330 Rinse mouth.<br>P501 Dispose of contents/ container in accordance with national regulations. |

### 3. Composition/information on ingredients

#### Mixtures

|                                    |        |
|------------------------------------|--------|
| 1-Decene, Homopolymer Hydrogenated | 100.0% |
| CAS number: 68037-01-4             |        |
| <b>Classification</b>              |        |
| Asp. Tox. 1 - H304                 |        |

The full text for all hazard statements is displayed in Section 16.

**Composition comments** \*The exact percentage withheld as a trade secret in accordance with 29 CFR 1910.1200.

### 4. First-aid measures

#### Description of first aid measures

|                                   |  |
|-----------------------------------|--|
| <b>General information</b>        | Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.   |
| <b>Inhalation</b>                 | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist. |
| <b>Ingestion</b>                  | Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.  |
| <b>Skin Contact</b>               | Rinse with water.  |
| <b>Eye contact</b>                | Rinse with water. Get medical attention if any discomfort continues.   |
| <b>Protection of first aiders</b> | First aid personnel should wear appropriate protective equipment during any rescue.  |

#### Most important symptoms and effects, both acute and delayed

|                            |  |
|----------------------------|--|
| <b>General information</b> | The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Inhalation of vapor or ingestion of liquid accompanied by vomiting may cause lung aspiration which could lead to pulmonary edema or chemical pneumonia. Exposed persons should seek medical advice and be kept under observation for at least 48 hours to monitor for delayed effects. |
| <b>Inhalation</b>          | May be harmful if inhaled.   |
| <b>Ingestion</b>           | Harmful: may cause lung damage if swallowed.   |

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**Skin contact** 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 impurities 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) and may cause defatting of the skin, leading to skin dryness and cracking. It is advised to include appropriate warnings on the SDS.

**Eye contact** No specific symptoms known. May be slightly irritating to eyes.

### Indication of immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically. Development of symptoms may be delayed for 24 to 48 hours. In the event of injection into underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

## 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** Use fire-extinguishing media suitable for the surrounding fire. Extinguish with foam, carbon dioxide, dry powder or water fog.

### Special hazards arising from the substance or mixture

**Flammability Class** 3.2 Combustible Liquid IIIB

**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up. Combustible liquid.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.

### Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

### Methods and material for containment and cleaning up

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### Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

### Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## 7. Handling and storage

### Precautions for safe handling

#### Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

#### Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

#### Storage precautions

Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

#### Storage class

Chemical storage.

### Specific end uses(s)

#### Specific end use(s)

The identified uses for this product are detailed in Section 1.

## 8. Exposure Controls/personal protection

### Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

#### Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

#### Hand protection

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

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|  |   |
|--|---|
| <b>Other skin and body protection</b>  | Wear appropriate clothing to prevent any possibility of skin contact.   |
| <b>Hygiene measures</b>                | Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.   |
| <b>Respiratory protection</b>          | Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. If ventilation is inadequate, suitable respiratory protection must be worn. No specific requirements are anticipated under normal conditions of use.   |
| <b>Environmental exposure controls</b> | Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

### 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

|   |                                   |
|---|-----------------------------------|
| <b>Appearance</b>                                   | Liquid.                           |
| <b>Color</b>  | Clear.                            |
| <b>Odor</b>   | Odorless.                         |
| <b>Odor threshold</b>                               | Not available.                    |
| <b>pH</b>   | Not applicable.                   |
| <b>Melting point</b>                                | Not applicable.                   |
| <b>Initial boiling point and range</b>              | Not available.                    |
| <b>Flash point</b>                                  | > 250°C COC (Cleveland open cup). |
| <b>Evaporation rate</b>                             | Not applicable.                   |
| <b>Flammability (solid, gas)</b>                    | Not applicable.                   |
| <b>Upper/lower flammability or explosive limits</b> | Not available.                    |
| <b>Vapor pressure</b>                               | 1 mm Hg @ 20°C                    |
| <b>Vapor density</b>                                | Not available.                    |
| <b>Relative density</b>                             | ≥ .834 @ 15°C                     |
| <b>Bulk density</b>                                 | Not available.                    |
| <b>Solubility(ies)</b>                              | Slightly soluble in water.        |
| <b>Partition coefficient</b>                        | Not available.                    |
| <b>Auto-ignition temperature</b>                    | Not available.                    |
| <b>Decomposition Temperature</b>                    | Not available.                    |
| <b>Viscosity</b>                                    | 65 cSt @ 40°C 10 cSt @ 100°C      |
| <b>Molecular weight</b>                             | 629                               |

### 10. Stability and reactivity

|                   |   |
|-------------------|---|
| <b>Reactivity</b> | The reactivity data for this product will be typical of those for the following class of materials: Hydrocarbons. |
|-------------------|---|

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|   |   |
|---|---|
| <b>Stability</b>                        | Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.   |
| <b>Materials to avoid</b>               | Avoid contact with the following materials: Acids. Alkalis. Oxidizing agents. Reducing agents.  |
| <b>Hazardous decomposition products</b> | Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors. Carbon monoxide (CO). |

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Based on available data the classification criteria are not met.

**ATE oral (mg/kg)** 500.0

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

##### Skin corrosion/irritation

**Animal data** Based on available data the classification criteria are not met.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

##### Respiratory sensitization

**Respiratory sensitization** Based on available data the classification criteria are not met.

##### Skin sensitization

**Skin sensitization** Based on available data the classification criteria are not met.

##### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

##### Carcinogenicity

**IARC carcinogenicity** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

##### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

**Reproductive toxicity - development** Based on available data the classification criteria are not met.

##### Specific target organ toxicity - single exposure

**STOT - single exposure** Not classified as a specific target organ toxicant after a single exposure.

##### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Not classified as a specific target organ toxicant after repeated exposure.

##### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

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|                            |   |
|----------------------------|---|
| <b>General information</b> | The severity of the symptoms described will vary dependent on the concentration and the length of exposure. |
| <b>Inhalation</b>          | No specific symptoms known.   |
| <b>Ingestion</b>           | No specific symptoms known.   |
| <b>Skin Contact</b>        | No specific symptoms known.   |
| <b>Eye contact</b>         | No specific symptoms known.   |
| <b>Route of entry</b>      | Ingestion Inhalation Skin and/or eye contact  |

### 12. Ecological Information

**Ecotoxicity** Dangerous for the environment if discharged into watercourses.

#### Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

#### Bioaccumulative potential

**Bio-Accumulative Potential** No data available on bioaccumulation.

**Partition coefficient** Not available.

#### Mobility in soil

**Mobility** No data available.

#### Other adverse effects

**Other adverse effects** None known.

### 13. Disposal considerations

#### Waste treatment methods

**General information** The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

**Disposal methods** Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Waste is suitable for incineration. Dispose of waste product or used containers in accordance with local regulations

### 14. Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

#### UN Number

Not applicable.

#### UN proper shipping name

Not applicable.

#### Transport hazard class(es)

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No transport warning sign required.

### Packing group

Not applicable.

### Environmental hazards

#### **Environmentally Hazardous Substance**

No.

### Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

## 15. Regulatory information

### US Federal Regulations

#### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

#### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

None of the ingredients are listed or exempt.

#### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed or exempt.

#### **SARA 313 Emission Reporting**

None of the ingredients are listed or exempt.

#### **CAA Accidental Release Prevention**

None of the ingredients are listed or exempt.

#### **FDA - Essential Chemical**

None of the ingredients are listed or exempt.

#### **FDA - Precursor Chemical**

None of the ingredients are listed or exempt.

#### **SARA (311/312) Hazard Categories**

None of the ingredients are listed or exempt.

#### **OSHA Highly Hazardous Chemicals**

None of the ingredients are listed or exempt.

### US State Regulations

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed or exempt.

#### **California Air Toxics "Hot Spots" (A-I)**

None of the ingredients are listed or exempt.

#### **California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are listed or exempt.



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### California Directors List of Hazardous Substances

None of the ingredients are listed or exempt.

### Massachusetts "Right To Know" List

None of the ingredients are listed or exempt.

### Rhode Island "Right To Know" List

None of the ingredients are listed or exempt.

### Minnesota "Right To Know" List

None of the ingredients are listed or exempt.

### New Jersey "Right To Know" List

None of the ingredients are listed or exempt.

### Pennsylvania "Right To Know" List

None of the ingredients are listed or exempt.

### Inventories

#### EU - EINECS/ELINCS

All the ingredients are listed or exempt.

#### Canada - DSL/NDSL

All the ingredients are listed or exempt.

#### US - TSCA

All the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

#### Philippines - PICCS

All the ingredients are listed or exempt.

#### New Zealand - NZIOC

All the ingredients are listed or exempt.

### 16. Other information

|                                  |   |
|----------------------------------|---|
| <b>Revision comments</b>         | NOTE: Lines within the margin indicate significant changes from the previous revision.  |
| <b>Issued by</b>                 | HS&E Manager.   |
| <b>Revision date</b>             | 4/12/2018   |
| <b>Revision</b>                  | 3   |
| <b>Supersedes date</b>           | 4/10/2018   |
| <b>SDS No.</b>                   | 4989  |
| <b>SDS status</b>                | Approved.   |
| <b>Hazard statements in full</b> | H302 Harmful if swallowed.<br>H304 May be fatal if swallowed and enters airways.<br>H412 Harmful to aquatic life with long lasting effects. |
| <b>End of SDS</b>                | _____   |

## Permavis 10

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.