



OptimOil

# Safety Data Sheet

## OptimOil HVI 46

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### Section 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

**Product name:** OptimOil HVI 46  
**Product code:** 1035

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use of substance / mixture:** PC17: Hydraulic fluids.

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

**Company name:** OptimOil Limited  
Church View Farm  
Kelsall Road  
Ashton  
CH3 8BH  
**Tel:** +44(0) 124 439 0528  
**Email:** [sales@optimoil.co.uk](mailto:sales@optimoil.co.uk)

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### Section 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**Classification under CLP:** This product has no classification under CLP.

#### 2.2. Label elements

**Label elements:** This product has no label elements.

#### 2.3. Other hazards

**PBT:** This product is not identified as a PBT/vPvB substance.



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## Section 3: Composition/information on ingredients

### 3.2. Mixtures

3.2.1 Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts

CAS Number: 85940-28-9

EC Number: 288-917-4

REACH Registra-on Number: 01-2119521201-61

Index No.: Not applicable

Specific concentra-on limits: None assigned

M factor: Not applicable

Concentra-on: ≤1.0%

H Statements: H315, H318, H411

Categories: Skin Irrit. 2; Eye Dam. 1; Aqua-c Chronic 2

3.2.2 Highly refined mineral oil mix

CAS Number: Various see below

EC Number: Various see below

REACH Registra-on Number: Various see below

Index No.: Various see below

Specific concentra-on limits: None assigned

M factor: Not applicable

Concentra-on: <100%

H Statements: Not classified.

Categories: Not Classified

Contains a mixture of petroleum derived mineral oils that contain <3% DMSO according to IP346

Base oil may contain one or more of the following: 101316-70-5, 309-875-6, 101316-71-6, 309-876-1 101316-72-7, 309-877 -7 RRN 01-2119489969-06/ 64741-88-4, 265-090-8, RRN 01-2119488706-23, 649-454-00-7/, 64741-89-5, 265-091-3, RRN 01-2119487067-30/ 64741-95-3, 265-096-0, RRN 01-2119487081-40/ 64741-96-4, 265-097-6, RRN 01-2119483621-38/ 64742-01-4, 265-101-6, RRN 01-2119488707-21/ 64742-45-6, 265-147-7/ 64742-52-5, 265-155-0, RRN 01-2119467170-45, 649-465-00-7/ 64742-53-6, 265-156-6, RRN 01-2119480375-34, 649-466-00-2/ 64742-54-7, 265-157-1, RRN 01- 2119484627-25, 649-461-00-8/ 64742-56-9, 265-159-2, RRN 01-2119480132-48, 649-469-00-9/ 64742-57-0, 265-160-8/ 01 -2119489287-22/, 64741-88-4, 265-090-8, RNN 01-2119488706-23 / 64742-62-7, 265-166-0 / RRN 01-2119480472-38/ 64742-65-0, 265-169-7, RRN 01-2119471299-27, 649-474-00-6/ 64742-70-7, 265-174-4, RRN 01-2119487080-42 / 68037- 01-4, 500-183-1, RNN 01-2119486452-34 / , 111-66-0, 203-893-7, RNN 01-2119486877-14, 01-2119409094-47 / 70693-43- 5, 813-310-3/ 72623-85-9, 276-736-3, RRN 01-2119555262-43/ 72623-86-0, 276-737-9, RRN 01-2119474878-16, 649-482- 00-x/ 72623-87-1, 276-738-4, RRN 01-2119474889-13, 649-483-00-5/ 74869-22-0 , 278-012-2, RRN 01-2119495601-36, 649 -484-00-0/ 8042-47-5, 232-455-8, 01-2119487078-27.

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## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur

**Eye contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses (if easy to do so). Get medical attention.

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**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur..

**Inhalation:** if inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

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

**Skin contact:** May cause defatting of the skin. May cause skin dryness and irritation.

**Eye contact:** May cause redness and irritation

**Ingestion:** No known significant effects or critical hazards

**Inhalation:** May cause irritation

## 4.3 Indication of any immediate medical attention and special treatment needed:

Treatment should be symptomatic and directed to relieving any effects.

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## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

- Extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog. Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** If heated or in cases of fire, pressure in a vessel will increase and container may burst. - Combustion products may include: carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide), metal oxide/oxides, phosphorous oxides and sulphur oxides (SO, SO<sub>2</sub>, etc..)

### 5.3. Advice for fire-fighters

Promptly isolate and secure the scene, remove all unnecessary and untrained persons from the vicinity if there is a fire. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European Standard EN 469 will provide a basic level of protection for chemical incidents

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## Section 6: Accidental release measures

Spillage causes slippery surface

6.1 Personal precautions, protective equipment and emergency procedures

- Stop any leak if it is safe to do so.

- Absorb with sand or other inert absorbent. Collect in containers and seal securely.

- Adopt best manual handling considerations when handling, carrying and dispensing.

- Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

6.2 Environmental precautions

- Do not discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.



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## 6.3 Methods and material for containment and cleaning up

- Stop any leak if it is safe to do so.
- Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.
- Dispose of in compliance with all local and national regulations.

## 6.4 Reference to other sections

- See Section 1 for emergency contact information.
- See Sec-on 5 for firefighting measures.  
See Sec-on 8 for information on appropriate personal protective equipment.  
See Sec-on 12 for environmental precautions.  
See Sec-on 13 for additional waste treatment information.

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## Section 7: Handling and storage

### 7.1 Precautions for safe handling

- Use appropriate personal protective equipment.
- Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

- Store in accordance with local regulations.
- Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.

### 7.3 Specific end use(s) - The identified uses for this product are detailed in Section 1.2

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## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

If this product contains ingredients with exposure limits, personal and/or workplace atmosphere monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### DNEL/PNEC Values

Chemical Name	WEL (short term)	WEL (long term)	STEL	WEL
Highly refined mineral oil mix	-	5mg/m <sup>3</sup>		5 mg/m <sup>3</sup> (IE)



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Chemical Name	DNEL (Industry; dermal, long term systemic effects)	DNEL (Industry; oral, long term systemic effects)	DNEL (Industry; inhalational, long term systemic effects)	PNEC
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	9.6 mg/kg bw/day		6.6 mg/m3	0.004 mg/l

Chemical Name	DNEL (Industry; dermal, long term systemic effects)	DNEL (Industry; oral, long term systemic effects)	DNEL (Industry; inhalational, long term systemic effects)	PNEC
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	9.6 mg/kg bw/day		6.6 mg/m3	0.004 mg/l

## 8.2. Exposure controls

- A full risk assessment should be undertaken before handling this material.
- Engineering Controls
- Appropriate Engineering Control: All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. No special requirements under ordinary conditions of use and with adequate ventilation.
- Eye Protection: If contact is likely, safety glasses are recommended.
- Hand Protection
- As specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled and the conditions of work and use. Recommended: Nitrile or other suitable glove. Breakthrough time represents how long a glove can be expected to provide effective permeation resistance. Always consult with your glove supplier for up-to-date technical information on breakthrough.
- Skin and Body Protection Wear appropriate clothing as protection against splashing. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
- Hygiene Measures 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.
- Respiratory Protection No Special requirements under ordinary conditions of use and with adequate ventilation

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Appearance: Amber



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- Physical state: Liquid
- Odour: Characteristic.
- Density: 0.85 at 15°C
- Viscosity: 46 cSt @ 40 °C
- Freezing point/Range: No data available.
- Boiling Point/Range:  $\geq 300^{\circ}\text{C}$
- Flashpoint:  $>200^{\circ}\text{C}$
- Autoignition Temperature: No information available

## 9.2. Other information

Other information:.

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## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

### 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.

### 10.4. Conditions to avoid

Heat. Hot surfaces. Sources of ignition.

### 10.5. Incompatible materials

Reactive or incompatible with the following materials: oxidizing materials.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

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## Section 11: Toxicological information

### 11.1. Information on toxicological effects



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Chemical Name	LC <sub>50</sub> (inhalation, rat)	LD <sub>50</sub> (dermal, rabbit)	LD <sub>50</sub> (oral, rat)
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	2.3 mg/l	20000 mg/kg	3080 mg/kg

11.1.1 Contact with eyes May cause redness and irritation

11.1.2 Contact with skin May cause redness and irritation

11.1.3 Ingestion May cause gastro-intestinal disturbances

11.1.4 Inhalation May cause irritation

11.2 Information on other hazards - Not applicable

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## Section 12: Ecological information

### 12.1. Toxicity

#### Substances

Chemical Name	IC <sub>50</sub> (algae)	EC <sub>50</sub> (daphnia)	LC <sub>50</sub> (fish)
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	2.1 mg/l (72hr)	5.4 mg/l (48hr)	4.5 mg/l (96hr)

12.2. Persistence and degradability

Not readily biodegradable.

12.2.1 Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts  
Not readily biodegradable.

12.2.2 Highly refined mineral oil mix  
Not readily biodegradable

12.3 Bioaccumulative potential

- No data available

12.4 Mobility in soil

- Immiscible with water.

12.5 Results of PBT and vPvB assessment

- Does not contain any PBT or PvB substances.

12.5.1 Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts Not Classified as PBT/vPvB by current EU criteria.



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12.5.2 Highly refined mineral oil mix Not Classified as PBT/vPvB by current EU criteria.

12.6 Endocrine disrupting properties

- Not applicable

12.7 Other adverse effects

- Spillages may form an oil layer on water surfaces causing physical damage to organisms. Oxygen transfer may also be impaired.

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## Section 13: Disposal considerations

13.1 Waste treatment methods

- Dispose of in compliance with all local and national regulations.

13.2 Classification

- This material and its containers must be disposed of as controlled waste. Dispose of waste via a licensed waste disposal contractor.

- EWC NUMBER: Allocation of a waste code number in accordance with the European Waste Catalogue, should be carried out in agreement with an EA authorised waste disposal company.

- Where possible, arrange for product to be recycled.

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## Section 14: Transport information

14.1 UN number or ID number

- UN No.: Not regulated.

14.2 UN proper shipping name

- Proper Shipping Name: Not applicable.

14.3 Transport hazard class(es)

- Hazard Class: Not applicable.

14.4 Packing group

- Packing Group: Not applicable.

14.5 Environmental hazards

- Not classified.

14.6 Special precautions for user

- Not available.

14.7 Maritime transport in bulk according to IMO instruments

- Not available.

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## Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture





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- Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
- Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2 Chemical safety assessment

- A chemical safety assessment (CSA) for this product has not yet been completed

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## Section 16: Other information

### Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet: - H315: Causes skin irritation. H318: Causes serious eye damage. H411: Toxic to aqua-c life with long lasting effects.

Disclaimer The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. 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 other process