SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
   Product name: RENOLIN B 15 VG 46

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

   Identified uses: Hydraulic fluid
   Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

   Manufacturer / Supplier: FUCHS LUBRICANTS (UK) PLC.
   New Century Street
   Hanley
   Stoke-on-Trent, Staffordshire, ST1 5HU
   UK

   Telephone: +44 (0) 1782 203700

   Contact Person: Product Safety department
   Telephone: +44 (0) 1782 203700
   E-mail: product.safety@fuchs-oil.com

1.4 Emergency telephone number: UK NHS: Dial 111. Ireland NPIS: Dial +353 1 8092566.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

   The product has not been classified as hazardous and does not need to be labelled according to regulation (EU) no 1272/2008 (CLP).

   Hazard summary
   Physical Hazards: No data available.

2.2 Label Elements

   not applicable

2.3 Other hazards:

   By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept. The product may not be released into the environment without control.

SECTION 3: Composition/information on ingredients
3.2 Mixtures

General information: Mixture containing severely refined base oils and additives. The components are not hazardous or are below required disclosure limits.

SECTION 4: First aid measures

General: Change clothes and shoes contaminated or soaked by the product. Never put rags contaminated by the product into clothing pockets.

4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.

Skin Contact: Wash with soap and water. The product is not skin irritating.

Ingestion: Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed:

May cause skin and eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Get medical attention if symptoms occur.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: CO2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added

Unsuitable extinguishing media: Water with a full water jet.

5.2 Special hazards arising from the substance or mixture:

During fire, gases hazardous to health may be formed.

5.3 Advice for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
In case of spills, beware of slippery floors and surfaces.

6.2 Environmental Precautions:
Prevent from spreading (e.g. by binding or oil barriers).

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acidbinders, universal binders, sawdust).

6.4 Reference to other sections:
See Section 8 of the SDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:
Provide adequate ventilation. Observe good industrial hygiene practices. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products.

7.2 Conditions for safe storage, including any incompatibilities:
Local regulations concerning handling and storage of waterpolluting products have to be followed. Prevent formation of aerosols. Do not heat up to temperatures close to the flash point.

7.3 Specific end use(s):
not applicable

Storage Class:
10, Combustible liquids

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters
Occupational Exposure Limits
None of the components have assigned exposure limits.

8.2 Exposure controls
Appropriate engineering controls:
Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information:
Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to inhndling the chemicals or the mineral oil products.
Eye/face protection: Safety glasses (EN 166) recommended during refilling.

Skin protection
Hand Protection: Material: Nitrile butyl rubber (NBR). Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. to safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other: Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.

Respiratory Protection: Ensure good ventilation/exhaustion at the workplace. Avoid breathing vapour/aerosol.

Thermal hazards: Not known.

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 to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: liquid
Form: liquid
Color: Pale yellow
Odor: Characteristic
Odor Threshold: Not applicable for mixtures
pH: not applicable
Freezing point: Not applicable for mixtures
Boiling Point: Value not relevant for classification
Flash Point: 210 °C
Evaporation Rate: Not applicable for mixtures
Flammability (solid, gas): Value not relevant for classification
Flammability Limit - Upper (%): Not applicable for mixtures
Flammability Limit - Lower (%): Not applicable for mixtures
Vapor pressure: Not applicable for mixtures
Vapor density (air=1): Not applicable for mixtures
Density: 0.87 g/ml (15,00 °C)
Solubility(ies):
Solubility in Water: Insoluble in water
**Product name:** RENOLIN B 15 VG 46

**Solubility (other):** No data available.

**Partition coefficient (n-octanol/water):** Not applicable for mixtures

**Autoignition Temperature:** Value not relevant for classification

**Decomposition Temperature:** Value not relevant for classification

**Kinematic viscosity:** 46 mm²/s (40 °C)

**Explosive properties:** Value not relevant for classification

**Oxidizing properties:** Value not relevant for classification

**9.2 Other information**

No data available.

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**SECTION 10: Stability and reactivity**

10.1 **Reactivity:** Stable under normal temperature conditions and recommended use.

10.2 **Chemical Stability:** No data available.

10.3 **Possibility of hazardous reactions:** None under normal conditions.

10.4 **Conditions to avoid:** Avoid heat or contamination.

10.5 **Incompatible Materials:** Strong oxidizing substances. Strong acids. Strong bases.

10.6 **Hazardous Decomposition Products:** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

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**SECTION 11: Toxicological information**

11.1 **Information on toxicological effects**

**Acute toxicity**

**Oral Product:** Not classified for acute toxicity based on available data.

**Dermal Product:** Not classified for acute toxicity based on available data.

**Inhalation Product:** Not classified for acute toxicity based on available data.

**Repeated dose toxicity Product:** No data available.

**Skin Corrosion/Irritation: Product:** No data available.
**Product name:** RENOLIN B 15 VG 46

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Data Available</th>
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</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
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<td>No data available.</td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
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<td>No data available.</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
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<td></td>
</tr>
<tr>
<td>In vitro</td>
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</tr>
<tr>
<td>In vivo</td>
<td></td>
<td>No data available.</td>
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<tr>
<td>Carcinogenicity</td>
<td></td>
<td>No data available.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td></td>
<td>No data available.</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity - Single Exposure</td>
<td></td>
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</tr>
<tr>
<td>Specific Target Organ Toxicity - Repeated Exposure</td>
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<td>No data available.</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
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<td>No data available.</td>
</tr>
<tr>
<td>Other Adverse Effects</td>
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</tr>
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</table>

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Acute toxicity**

<table>
<thead>
<tr>
<th>Environment</th>
<th>Data Available</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Aquatic Invertebrates</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

**Chronic Toxicity**

<table>
<thead>
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<th>Data Available</th>
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</thead>
<tbody>
<tr>
<td>Fish</td>
<td>No data available.</td>
</tr>
<tr>
<td>Aquatic Invertebrates</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

**Toxicity to Aquatic Plants**
Product name: RENOLIN B 15 VG 46

12.2 Persistence and Degradability

Biodegradation
Product: No data available.

12.3 Bioaccumulative Potential
Product: No data available.

12.4 Mobility in Soil:
No data available.

12.5 Results of PBT and vPvB assessment:
The product does not contain any substances fulfilling the PBT/vPvB criteria.

12.6 Other Adverse Effects:
No data available.

Water Hazard Class (WGK):
WGK 1: slightly water-endangering.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: Dispose in accordance with all applicable regulations.

Disposal methods: Do not empty into drains; dispose of this material and its container in a safe way. When storing used products, ensure that the waste categories and mixing instructions are observed.

European Waste Codes
13 01 10*: mineral based non-chlorinated hydraulic oils

SECTION 14: Transport information

ADR/RID
14.1 UN Number: –
14.2 UN Proper Shipping Name: –
14.3 Transport Hazard Class(es)
Class: Non-dangerous goods
Label(s): –
Hazard No. (ADR): –
Tunnel restriction code: –
14.4 Packing Group: –
14.5 Environmental hazards: –
14.6 Special precautions for user: –
Product name: RENOLIN B 15 VG 46

ADN
14.1 UN Number: –
14.2 UN Proper Shipping Name: –
14.3 Transport Hazard Class(es)
   Class: Non-dangerous goods
   Label(s): –
14.3 Packing Group: –
14.5 Environmental hazards: –
14.6 Special precautions for user: –

IMDG
14.1 UN Number: –
14.2 UN Proper Shipping Name: –
14.3 Transport Hazard Class(es)
   Class: Non-dangerous goods
   Label(s): –
   EmS No.: –
14.3 Packing Group: –
14.5 Environmental hazards: –
14.6 Special precautions for user: –

IATA
14.1 UN Number: –
14.2 Proper Shipping Name: –
14.3 Transport Hazard Class(es):
   Class: Non-dangerous goods
   Label(s): –
14.4 Packing Group: –
14.5 Environmental hazards: –
14.6 Special precautions for user: –

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not applicable.

SECTION 15: Regulatory information

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

   EU Regulations

   Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none


15.2 Chemical safety assessment:
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Revision Information: Vertical lines in the margin indicate an amendment.
Wording of the H-statements in section 2 and 3
none

Training Information: Follow training instructions when handling this material.

Other Information: The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies. The classification results from the Conventional Method mentioned in regulation EU 1272/2008 (CLP).

Revision Date: 07.04.2016

Disclaimer: The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature.