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

· **1.1 Product identifier**
· **Trade name: VICKERLUBE BIO HYF 46**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of Use**
SU2b Offshore industries
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· **Product category**
PC17 Hydraulic fluids
PC24 Lubricants, greases, release products
· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
· **Environmental release category**
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC7 Use of functional fluid at industrial site

· **Application of the substance / the mixture** BIODEGRADABLE HYDRAULIC OIL

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
BENJN.R.VICKERS & SONS LTD.
6 Clarence Road
Leeds
LS10 1ND
United Kingdom

· **Further information obtainable from:** Product safety department: msds@vickers-oil.com
· **1.4 Emergency telephone number:**
During normal opening times 08:30- 16:30 UK : +44 (0)113 386 7654
All other times: +44 (0) 1865 407333
+44 (0)1865 407333 24-Hour Emergency Telephone

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified, according to the GB CLP regulation.

· **2.2 Label elements**
· **Hazard pictograms** None
· **Signal word** None
· **Hazard statements** None
· **Additional information:**
Safety data sheet available on request.
· **2.3 Other hazards**
Endocrine Disruption- Toxicity
The substance/mixture does not contain components considered to have endocrine disrupting properties according to UK REACH Article 57(f) or
Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

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levels of 0.1% or higher.
Endocrine Disruption- Ecotoxicity
The substance/mixture does not contain components considered to have endocrine disrupting properties according to UK REACH Article 57(f) or
Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions

· **Dangerous components:**	
Fatty acids, C16-18 and C18-unsatd., triesters with trimethylolpropane Acute Tox. 4, H302	70-100%
2-ethylhexyl (E)-octadec-9-enoate Acute Tox. 4, H302	<2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** No special measures required.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Sand
· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon Dioxide (CO2)
Carbon monoxide (CO)
· **5.3 Advice for firefighters**
· **Protective equipment:** No special measures required.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **6.4 Reference to other sections** No dangerous substances are released.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** No special measures required.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Do not heat plastic containers above 60 C
· **Information about storage in one common storage facility:** Not required.
· **Information about storage conditions:**
Use within 3 years of manufacture
Do not store in direct sunlight
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
· **Respiratory protection:** Not required.
· **Hand protection**
Oil resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye/face protection** Goggles recommended during refilling

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Colour:**	Light yellow
· **Odour:**	Sweetish
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	Undetermined.
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	> 180 °C (Seta)
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity at 40 °C**	46 cSt
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 15 °C:**	0.907 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Oily
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Solvent content:**	
· **Organic solvents:**	0.0 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

· **Information with regard to physical hazard classes**	
· **Explosives**	None
· **Flammable gases**	None
· **Aerosols**	None
· **Oxidising gases**	None

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· **Gases under pressure**	None
· **Flammable liquids**	None
· **Flammable solids**	None
· **Self-reactive substances and mixtures**	None
· **Pyrophoric liquids**	None
· **Pyrophoric solids**	None
· **Self-heating substances and mixtures**	None
· **Substances and mixtures, which emit flammable gases in contact with water**	None
· **Oxidising liquids**	None
· **Oxidising solids**	None
· **Organic peroxides**	None
· **Corrosive to metals**	None
· **Desensitised explosives**	None

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Sensitisation:** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

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· **12.2 Persistence and degradability** Biodegradable according to OECD 301B
· **Other information:**
This product and its components have been evaluated by independent laboratories. Using these test results, Vickers Oils has determined that it meets the VGP definition of an Environmentally Acceptable Lubricant.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

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SECTION 14: Transport information

· **14.1 UN number or ID number** · **ADR, ADN, IMDG, IATA**	Not hazardous for transport
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Not hazardous for transport
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Not hazardous for transport
· **14.4 Packing group** · **ADR, IMDG, IATA**	Not hazardous for transport
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

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· **UN "Model Regulation":**	Not hazardous for transport

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H302 Harmful if swallowed.

· **Department issuing SDS:**
Product safety department
msds@vickers-oil.com

· **Contact:**
Emergency 24 hrs Telephone numbers;
Europe (English) +44 1865 407333
Europe (English, Turkish) +44 1235 239670
Turkey (English, Turkish) 0800 621 2139 (toll-free, Turkey only)
Middle East / Africa (English) +44 1235 239671
Americas (English, Spanish, Portuguese) +1 215 207 0061
Americas (English) +1 202 464 2554
Mexico (English, Spanish) +52 555 004 8763
Brazil (Portuguese, Spanish, English) +55 11 3197 5891
Chile (English, Spanish) +56 225 829 336
Colombia (English, Spanish) +57 601 508 7337
Argentina (English, Spanish) +54 11 5984 3690
Asia-Pacific (English, Japanese, Mandarin) +65 3158 1074
Asia-Pacific (English) +65 3165 2217
China (English , Mandarin) 400 120 6011 (toll-free, China only)
China (Mainland) (English, Mandarin) 0532 8388 9090
Taiwan (English, Mandarin) +886 2 8793 3212
Japan (English, Japanese) 0120 015 230 (toll-free, Japan only)

· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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Acute Tox. 4: Acute toxicity – Category 4

· *** Data compared to the previous version altered.**