

# BIOHYD OPTI HEPR

FULLY SYNTHETIC BIODEGRADABLE HYDRAULIC FLUID / HEPR SPECIFICATION

## Description

**LUBECO™ BIOHYD OPTI** is a high-performance, renewable hydrocarbon-based (PAO) environmentally acceptable hydraulic fluid (EALs). On the scale of biodegradable hydraulics fluids HEPR is a well-balanced combination of biodegradability and quality of fully synthetic PAO base oils. **BIOHYD OPTI** provides a very high level of thermo-oxidative and hydrolytic stability at both high and extremely low operating temperatures. Its modern, zinc-free and ash-free additive technology guarantees maximum lubrication reliability, shear stability and corrosion protection. **BIOHYD OPTI** features a low foaming tendency, and good water and air release characteristics, as well as compatibility with seal materials. **BIOHYD OPTI** is readily biodegradable product for reduced environmental footprint.

## Specifications

- DIN 51524-3 HVLP
- ISO 6743-4 HEPR
- ISO VG 32 / 46 / 68
- AFNOR NF E 48-603 (HL);
- Cincinnati-Milacron P-38 (HL-32), P-55 (HL-46), P-54 (HL-68), P-57 (HL-150), P-62 (FC-10)
- DIN 51515, p.1 (L-TD), p.2 (L-TG); Siemens TLV 9013 04;
- BS 489 ; GEK 32568 A/C ; MIL-L-17672 D; CEGB 207001
- Brown Boveri HTGD 90117 ; Alstom HTGD 90 117 V0001 S
- U.S.Steel 120; Westinghouse Electric Corp. Spec.

## Areas of Application

**BIOHYD OPTI** is suitable for use in all types of hydraulic systems. It is specifically designed to withstand extreme conditions and corrosion while operating in severe outdoor environments. As well as other types of **LUBECO™** biodegradable hydraulic fluids **BIOHYD OPTI** is particularly recommended for hydraulic systems operating in environmentally sensitive or protected areas.

**BIOHYD OPTI** is well compatible with the most commonly used elastomers and it can be mixed with other mineral or synthetic hydraulic fluids (with some types compatibility must be verified).

Before changing over to **BIOHYD OPTI** verify compatibility and enquire for our filling instructions.

Note: Cleaning function of BIOHYD OPTI HEPR fluids may loosen any deposits in the hydraulic system.

## Characteristic features:

- Superior thermo-oxidative and hydrolytic stability;
- Outstanding frictional performance and anti-wear protection;
- Special non-foaming additives;
- Protection against rust and corrosion;
- Designed to withstand extreme conditions, extra low temperature properties;
- Compatible with seal materials, paints and hoses;
- Intended for severe service, extremely long change intervals;
- Readily biodegradable according to OECD 301B and OECD 301D



**Typical characteristics**

PARAMETER	UNIT	TEST METHOD	TYPICAL VALUE
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	870
Kinematic Viscosity at 40°C (ISO VG)	mm <sup>2</sup> /s	ISO 3104	46
Kinematic Viscosity at 100°C (ISO VG)	mm <sup>2</sup> /s	ISO 3104	9.5
Pour point	°C	ISO 3016	< -65
Flash point, COC	°C	ISO 2592	> 240
Viscosity index	-	ASTM D2270	> 190
FZG Gear Test A 8.3/90 Damage load level	rating	DIN 51354/2	>12
Oxidation stability	min to 25 psi Loss	ASTM D2272	1,200
Biodegradability (within 28 days)	%	OECD 301D	> 60

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