Renewable Lubricants, Inc.
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Bio-Hydraulic Hoist Oil (BHHO™)ISO 32

STABILIZED™ by Renewable Lubricants

"Biobased Lubricants that Perform Like Synthetics"

Bio-BHHO™ is an ultimately biodegradable[1] vegetable based formula that replaces mineral oil based hydraulic fluids for hydraulic hoist applications. It is an economical product that is specially designed for hydraulic hoists used for lifting transportation equipment in garages and shops. A zinc-free additive system has also been developed that is environmentally friendly and meets most pump requirements. Although this formula will not have the cold temperature performance and oxidation stability of the Bio-Ultimax Series Hydraulic Fluids, it does provide performance over low erucic rapeseed oil formulas and was designed to operate in applications where temperatures reach less than 100^0C. In a comparative study, the commercial rapeseed formula produced a Rotary Bomb Oxidation Test (RBOT) ASTM D-2272 of 27 minutes while the BIO-BHHO formula outperformed the commercial rapeseed formula at a RBOT time of >250 minutes.

The super high viscosity index of the HOBS naturally improves the thermal shear stability over mineral oil and increases load capacity. The HOBS' extremely low volatility increases the flash and fire safety features and reduces the foam tendency in the formula.

Bio-BHHO™ meets the Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) guidelines for Environmentally Acceptable Lubricants (EALs), and should be used in hydraulic systems where **LOW TOXICITY**, **BIODEGRADABILITY** and **NON-BIOACCUMULATION** properties are required. This product exceeds the acute toxicity (LC-50 / EC-50 >1000 ppm) criteria adopted by the US Fish and Wildlife Service and the US EPA. Bio-BHHO is an ENVIRONMENTALLY RESPONSIBLE hydraulic fluid that is formulated from renewable agricultural plant resources. We believe Earth's environmental future rests in the use of renewable materials.

[1]Ultimate Biodegradation (Pw1) within 28 days in ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants

Typical Specifications

ISO Grade	**32**
Specific Gravity @ 60^0 F.	.88
VISCOSITIES:	
@100^0 C., cSt.	6.7
@40^0 C., cSt	30.6
Viscosity Index	185
Flash Point, COC ^{0}C.	232
Pour Point, ^{0}C.	-35
Copper Corrosion Strip 3hr @ 100^0 C	1A
4 Ball Wear, 1h, 167^0 F, 1200 RPM, 40k	.40 (max.)
FZG Test	11
Hydrolytic Stability, (D-2619)	Pass
Foam Sequence I, II, III (D-892)	Pass
Rust Prevention, (D-665)	Pass
Demulsibility (D-1401)	Pass

STABILIZED by Renewable Lubricants* is Renewable Lubricants, Inc.'s trademark on their proprietary and patented anti-oxidant/anti-wear technology. High Oleic Base Stock (HOBS) are agricultural vegetable oils. This Stabilized technology allows the HOBS to perform as a high performance formula in high-temperature applications, reducing oil thickening and deposits.
Patented Product: US Patent 6,383,992, US Patent 6,534,454 with additional Pending and Foreign Patents

Availability	**F.O.B. :Hartville, Ohio, USA**	**1 Gallon**	**5 Gallon Pail**	**Drum**	**Totes**	**Bulk**
	Product Item #	**81403**	**81404**	**81406**	**81407**	**81409**