

# KLONDIKE BIO-Synthetic EAL Hydraulic Oils



## PRODUCT DESCRIPTION

KLONDIKE BIO-Synthetic EAL Hydraulic Oils are readily biodegradable, non-toxic, high performance hydraulic oils that exceed industry requirements for Environmentally Acceptable Lubricants (EAL). These advanced fluids are designed to give maximum protection and performance in hydraulic equipment used in environmentally sensitive areas.

## APPLICATIONS

KLONDIKE BIO-Synthetic EAL Hydraulic Oils are designed for maximum performance and system protection in industrial and mobile hydraulic equipment. Typical industries where this advanced technology is ideal for use include construction, mining, dredging, marine, agriculture, exploration, oil and gas, and production plant operations.

BIO-Synthetic EAL Hydraulic Fluids are designed to replace traditional formulations of mineral and synthetic fluids, offering proven performance when used in a wide variety of stationary and mobile hydraulic equipment. These VHVI fluids have performed successfully in hydraulic systems up to 10,000 psi and in systems with ultra-fine filtration.

For optimum performance, always follow the viscosity grade recommendation of the system manufacturer.



## FEATURES AND BENEFITS

BIO-Synthetic EAL Hydraulic Oils are ultimately biodegradable biosynthetic formulas that directly replace mineral oil based hydraulic fluids. Formulated to perform in high and low pressure hydraulic systems that require anti-wear, anti-rust, anti-oxidation, anti-foam, and demulsibility properties.

BIO-Synthetic EAL Hydraulic Oils provide greatly improved oxidation resistance and stability over standard plant/vegetable/HETG and unsaturated HEES type fluids. Inhibited against moisture and rusting in both fresh and sea water and pass A and B Sequences of the ASTM D-665 Turbine Oil Rust Test. Very high viscosity index (VHVI) offers superior energy conservation, improves the thermal shear stability of the formula, and increases load capacity.

BIO-Synthetic EAL Hydraulic Oil formulations have very low volatility, increasing the flash point which naturally improves the fluids' fire resistance. Formulated to provide seal conditioning for longer seal life and to reduce oil leakage.

BIO-Synthetic EAL Hydraulic Oils use environmentally friendly, non-toxic, non-zinc containing, ashless chemistry meeting the Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) guidelines for Environmentally Acceptable Lubricants (EALs). These advanced formulations should be used in hydraulic systems where low toxicity, biodegradability, and non-bioaccumulation performance properties are required; exceeding the acute toxicity (LC-50 / EC-50 >1000 ppm) criteria limits adopted by the US Fish and Wildlife Service and the US EPA.

KLONDIKE BIO-Synthetic EAL Hydraulic Oils provides value through the following benefits:

- **BIO-Synthetic** – biobased synthetic esters with VHVI maximize fluid performance in extreme conditions.
- **Advanced performance** – Ashless formulation provides outstanding protection for hydraulic pumps and systems for high operating efficiency.
- **Long oil life** – highly resistant to oxidation and degradation for long service life.



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## TYPICAL TECHNICAL PROPERTIES

PROPERTY	TEST METHOD	BIO-SYN EAL 32	BIO-SYN EAL 46
Viscosity Grade		32	46
Viscosity cSt. @ 40°C	ASTM D445	32.0	46.0
Viscosity cSt. @ 100°C	ASTM D445	7.3	9.6
Viscosity Index	ASTM D2270	204	200
Pour Point, °C	ASTM D97	-52	-44
Flash Point, °C	ASTM D92	240	243
Fire Point, °C	ASTM D92	260	268
FZG Load Stage Protection	DIN 51354-2	12	12
Corrosion Protection	ASTM D665A	Pass	Pass
Biodegradability, 28 Days	OECD 301B	> 70%	> 70%
Biodegradable status	OECD 301B	Readily	Readily

All stated physical properties are typical of standard production and may vary.

### HEALTH AND SAFETY

This product is not expected to have adverse health implications when used for its intended application. For detailed information on safe handling of this product, refer to its Material Safety Data Sheet (MSDS). To obtain an MSDS on this or any other KLONDIKE product, please visit [www.klondikelubricants.com](http://www.klondikelubricants.com) or call 1-877-293-4691. When disposing of used product, be responsible to the environment.

### PRODUCT NUMBERS

BIO-SYNTHETIC EAL 32	Pail: 18.9 L / 5 GAL	KL-BL3280
	Drum: 208 L / 55 GAL	KL-BL3290
	Tote: 1040 L / 275 GAL	KL-BL3295
BIO-SYNTHETIC EAL 46	Pail: 18.9 L / 5 GAL	KL-BL3480
	Drum: 208 L / 55 GAL	KL-BL3490
	Tote: 1040 L / 275 GAL	KL-BL3495

### BRAVING THE FORCE OF MOVEMENT

KLONDIKE stands for robust, reliable, high quality products tailored to suit the requirements of the on- and off-road heavy duty, automotive and industrial markets. Our solutions span from trend-setting retail lubricants through small-batch custom formulations to large bulk orders ready for immediate delivery.

The extensive KLONDIKE product range includes premium oils, lubricants, greases, chemicals and specialty fluids formulated with virgin base oils and protective inhibitors. Designed to handle the most extreme climates and operating conditions, the KLONDIKE products protect and extend the life of your equipment, optimize performance and improve productivity while meeting and exceeding industry standards and specifications.

#### KLONDIKE Lubricants Corporation

Toll-free 1-877-293-4691

[info@klondikelubricants.com](mailto:info@klondikelubricants.com)  
[www.klondikelubricants.com](http://www.klondikelubricants.com)

