

October 28, 2015

Klüber Lubrication NA LP • P.O. Box 131359 • Tyler, CR 2120, Texas 75713, Phone 903.534.8021 • Fax 903.581.4376

# Product Data Sheet



NOTE: The information in this publication is the result of careful testing in our laboratories, complemented by selected literature. It does not in any way constitute a guarantee, nor does it serve as a license to operate any patent. Due to widely varying conditions of product use, which are beyond our control, it is strongly recommended that the product be tested for suitability. Product typical properties in this publication are current.

## BIODEGRADABLE HYDRAULIC OIL

### EnviroTech® EAL H SERIES

*EnviroTech® EAL H Series hydraulic oils are premium environmentally responsible hydraulic fluids designed to provide exceptional performance in hydraulic and circulation systems. These biosynthetic formulations have been engineered to meet or exceed the performance requirements of most hydraulic pump and system manufacturers, while satisfying the rigorous criteria for biodegradability and toxicity. They offer the anti-wear and film strength characteristics necessary for hydraulic systems operating under high load and high pressure. EnviroTech® EAL H hydraulic oils are inhibited for excellent protection against rust and corrosion. In addition to their excellent performance capability, EnviroTech® EAL H hydraulic oils satisfy the requirements for ultimate biodegradability and non-toxicity making them an excellent choice for hydraulic and circulation systems operating in environmentally sensitive areas. Base oils and additives in these products pass and exceed the acute toxicity (LC-50) criteria adopted by the U.S. Fish and Wildlife Service and the U.S. EPA.*

*EnviroTech® EAL H Series hydraulic oils meet the definition of a biobased lubricant as outlined in section 9001 of The Farm Security and Rural Investment Act (FSRIA) of 2002 (Public Law 107-171/ HR 2642) and qualifies for preferred procurement by U.S. Federal Agencies as set forth in FSRIA section 9002.*

*EnviroTech® EAL H Series complies with the “biodegradable”, “minimally-toxic” and “not bioaccumulative” standards as defined in Appendix A of the 2013 Vessel General Permit issued by the United States Environmental Protection Agency.*

### Physical Properties

PRODUCTS	H-32	H-46	H-68	H-100
ISO Grade	32	46	68	100
Viscosity				
@ 40°C, cSt	31.0	43.8	64.2	92.4
@ 100°C, cSt	6.8	9.7	12.6	16.8
Viscosity Index	187	215	199	199
Specific Gravity	0.875	0.877	0.888	.900
Flash Point, °F (°C)	460 (238)	470 (243)	485 (252)	491 (255)
Fire Point, °F (°C)	505 (263)	510 (266)	520 (271)	536 (280)
Pour Point, °F (°C)	-40 (-40)	-39 (-38)	-39 (-38)	-35 (-31)
4-Ball Wear, mm	0.38	0.35	0.34	0.35
FZG Gear Test,	12	12	12	12
Emulsion Tendency	40/40/0 (10)	40/40/0 (10)	40/40/0 (10)	40/40/0 (10)
Biodegradation Classification	ultimate Pw1	ultimate Pw1	ultimate Pw1	ultimate Pw1
VGP/EAL Compliant	Yes	Yes	Yes	Yes

Prior to transitioning equipment on board vessels to **EnviroTech® EAL H Series**; the ship owner/operator should verify with the equipment manufacturer that the sealing system is compatible for use with an EAL.

**EnviroTech® EAL H Series** lubricants do not produce an iridescent appearance (sheen) on the surface of the water when tested in accordance with the U.S. Coast Guard Static Sheen Test.

**Shelf Life:** Product shelf life is 3 years from the date of manufacture, after which the product should be recertified prior to use.