Product information

EnviroTech® EAL H Series

Biodegradable hydraulic oil

Your benefits at a glance

- Environmentally responsible
- Operates under high load and high pressure
- Excellent protection against rust and corrosion

Your requirements - our solution

EnviroTech EAL H Series hydraulic oils are zinc-free ashless 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.

Application notes

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.

Material safety data sheets

Material safety data sheets can be requested via our website https://www.klsummit.com. You may also obtain them through your contact person at Summit Lubrication.

Characteristics	EnviroTech EAL H-32	EnviroTech EAL H-46	EnviroTech EAL H-68	EnviroTech EAL H-100
Article number	340214	340215	340216	340387
Composition, type of oil	ester oil	ester oil	ester oil	ester oil
Vessel General Permit	passed	passed	passed	passed
Biodegradability, OECD 301 B, within, 28 days	≥ 60 %	≥ 60 %	≥ 60 %	≥ 60 %
Breakdown voltage, ASTM D877	approx. 46 kV	approx. 40 kV	approx. 40 kV	approx. 40 kV
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 82°C	40/40/0 (10) ml (min)	40/40/0 (10) ml (min)	40/40/0 (10) ml (min)	40/40/0 (10) ml (min)
Density	0.88 g/cm³	0.88 g/cm³	0.88 g/cm³	-
Density, 15.6°C	approx. 0.88 g/cm³	approx. 0.88 g/cm³	approx. 0.88 g/cm³	approx. 0.90 g/cm³
Fire point, Cleveland open cup	approx. 260 °C	approx. 268 °C	approx. 274 °C	approx. 280 °C
Flash point, Cleveland open cup	-	-	-	≥ 235 °C

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Flash point, ASTM D92, Cleveland open cup	≥ 215 °C	≥ 225 °C	≥ 230 °C	-
Foam test, ISO 6247 / ASTM D892, 24°C, sequence I	< 30/0 ml	< 30/0 ml	< 30/0 ml	< 30/0 ml
Foam test, ISO 6247 / ASTM D892, 24°C, sequence III	< 30/0 ml	< 30/0 ml	< 30/0 ml	< 30/0 ml
Foam test, ISO 6247 / ASTM D892, 93.5°C, sequence II	< 30/0 ml	< 30/0 ml	< 30/0 ml	< 30/0 ml
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 6.9 mm^2/s	approx. 9.7 mm^2/s	approx. 12.5 mm^2/s	approx. 16.7 mm^2/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 31 mm^2/s	approx. 44 mm^2/s	approx. 64.1 mm^2/s	approx. 92.0 mm^2/s
Viscosity index, ASTM D2270	approx. 184	approx. 199	approx. 198	approx. 199
Copper corrosion, ASTM D130, 3 h, 100°C	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	approx. -40 °C	approx. -40 °C	approx. -39 °C	approx. -34 °C
Oxidation stability, ASTM D2272, Rotating Pressure Vessel Oxidation Test (RPVOT), operating time at 150°C	> 350 min.	> 350 min.	> 350 min.	> 300 min.
Four-ball tester: wear characteristics, ASTM D4172, method: B, 1200 min^{-1} / 40 kgf, 60 min, 75°C	approx. 0.38 mm	approx. 0.35 mm	approx. 0.35 mm	approx. 0.35 mm
FZG scuffing test, A / 8.3 / 90, failure load stage	12	12	12	12
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	36 months	36 months	36 months

Summit Lubrication

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