

EnviroTech® EAL EP Series

Biodegradable EP gear lubricant



Your benefits at a glance

- Environmentally Responsible
- Protects Gears and Bearings at High Temperatures
- Performs Under Extreme Pressure Conditions

Your requirements - our solution

EnviroTech EAL EP Gear Oils are advanced, environmentally responsible lubricants formulated to protect gears and bearings in applications exposed to high temperatures and/or extreme pressure.

EnviroTech EAL EP Gear Oils meet or exceed the following performance requirements:

- U.S. Steel 224
- AGMA 9005/250.04
- DIN 51517, Part 3
- David Brown DB S1.53.101
- Cincinnati Machine E.P.

Classified as ultimately biodegradable (Pw1) and non-toxic, EnviroTech EAL EP Gear Oils are well-suited for equipment operating in environmentally sensitive areas.

The EnviroTech EAL EP Series meets the “biodegradable,” “minimally toxic,” and “not bioaccumulative” criteria outlined in Appendix A of the 2013 Vessel General Permit (VGP) issued by the U.S. Environmental Protection Agency.

Application

EnviroTech EAL EP series oil's biosynthetic formulation is ideal for heavy-duty spur, helical, bevel, and worm gear systems operating under severe loads or shock conditions.

Application notes

Prior to converting vessel equipment to EnviroTech EAL EP Series, confirm with the equipment manufacturer that the sealing system is compatible with EAL lubricants.

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 EP 220	EnviroTech EAL EP 320
Article number	340443	340227
Composition, type of oil	ester oil	ester oil
Biodegradability, within, 28 days	≥ 60 %	-
Density, 15.6°C	-	approx. 0.900 g/cm ³
Flash point, ASTM D92, Cleveland open cup	≥ 260 °C	≥ 260 °C
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 29.3 mm ² /s	approx. 45.6 mm ² /s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 186 mm ² /s	approx. 320 mm ² /s
Viscosity index, ASTM D2270	approx. 199	approx. 202
Copper corrosion, ASTM D130, 3 h, 100°C	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree

EnviroTech® EAL EP Series

Biodegradable EP gear lubricant



Characteristics	EnviroTech EAL EP 220	EnviroTech EAL EP 320
Steel corrosion, DIN ISO 7120 / ASTM D665, method B, 24 h, 60°C	rust-free	rust-free
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	approx. -32 °C	approx. -27 °C
Four-ball tester, load wear index, ASTM D2596	approx. 57	approx. 57
Four-ball tester: wear characteristics, ASTM D4172, method: B, 1200 min ⁻¹ / 40 kgf, 60 min, 75°C	approx. 0.30 mm	approx. 0.30 mm
Four-ball tester, welding load, ASTM D2783	400 kgf	400 kgf
FZG scuffing test, A / 8.3 / 90, failure load stage	> 12	> 12
Timken test, ASTM D2782, OK load	70 lbs	70 lbs
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

Summit Lubrication

Your expert in specialty lubricants. Since 1982, we have partnered with you to bring you the right solution and advanced lubrication technologies. With over 500 products, from air and gas compressor oils to refrigeration oils, we develop top-of-the-line products tailored to your specific needs. Your success is our success.

Summit Lubrication a brand of Klüber Lubrication NA LP /
9010 County Road 2120, Tyler, TX 75707 /
Phone: +1 800 749 5823 / www.klsummit.com

The data in this document is based on our general experience and knowledge at the time of publication and is intended to give information of possible applications to a reader with technical experience. It constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

Publisher and Copyright: Klüber Lubrication NA LP. Reprints, total or in part, are permitted only prior consultation with Klüber Lubrication NA LP and if source is indicated and voucher copy is forwarded.