



Pinnacle[®] Marine Gear

Extreme Pressure Marine Gear Oil

Premium performance, EP synthetic gear lubricant specifically designed for the lubrication of marine fuel and lube oil purifier gears and marine reduction gearing, and suitable for use over a very wide temperature range. Formulated from a blend of polyalpha olefin (PAO) and diester synthetic base fluids, enhanced with synthetic-specific oxidation inhibitors and high thermal stability EP additives. It combines excellent copper compatibility at high temperatures with superior anti-wear characteristics.

APPLICATIONS

- Gearboxes in marine fuel and lube oil centrifugal purifiers
- Marine main reduction gearboxes and other marine gear and bearing lubrication applications where an ISO 220, EP gear lubricant is required
- Gear and bearing applications where very high temperatures, or very wide temperature variations are experienced
- Marine deck gearboxes subject to very low temperatures
- Bath, splash and circulating lubrication systems

PERFORMANCE STANDARDS

- Alfa Laval D-220 Group D approval
- Meets requirements for Ulstein marine reduction gears

ENVIRONMENT, HEALTH and SAFETY

Information is available on this product in the Caltex Material Safety Data Sheet (MSDS) and Caltex Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit www.caltexoils.com.

BENEFITS

- ✦ **Long oil life**
Very high thermal and oxidation stability of the inhibited synthetic base fluid provides low rates of oil degradation, even under severe high temperature conditions. High thermal stability of the EP system resists loss of anti-wear properties during extended drain intervals. Alfa Laval permits double length drain intervals with approved Group D lubricants.
- ✦ **Reduced maintenance costs**
Excellent thermal and oxidation stability, combined with the solvency effect of the diester component, provides resistance to the formation of deposits which can disrupt fluid film lubrication, leading to increased wear rates. The thermally stable EP system provides highly effective protection of gears under high temperature, highly loaded conditions, while providing minimal corrosion of copper-containing bearings and other components.
- ✦ **Energy savings**
Synthetic base fluid provides enhanced lubricity under highly loaded conditions, minimizing frictional losses. Its very high VI and extremely high shear stability ensure maximum retention of viscosity under high temperature conditions, helping to avoid energy-consuming boundary lubrication conditions.
- ✦ **Minimizes change-over costs**
Unlike many other synthetic lubricants, the balanced PAO, diester base fluid combination is compatible with coatings, gaskets, hoses and seals intended for use with mineral oils.

KEY PROPERTIES

ISO Grade	220
Copper Corrosion, 24 hrs @ 121°C	1b
Flash Point, COC, °C	250
Four-Ball EP Weld Point, kg	252
FZG Fail Stage	>12
Viscosity	
mm ² /s @ 40°C	200
mm ² /s @ 100°C	21.2
Viscosity Index	126

9708

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

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