



Description

Multigrade marine lubricant that exceeds traditional S.H.P.D. feature levels. Specially formulated to comply with the demanding needs of modern, turbo and revolution, four-stroke diesel engines in water, under the most severe working conditions, in fishing vessels, leisure boats, auxiliary port vessels and merchant ships. They are specially suited for:

For use in turbocharged, quick-revving trunk diesel engines intended for propulsion, in auxiliary groups and as emergency engines to generate electric current, as well as in engines requiring a lubricant of higher quality.

Valid for engines that must comply with "EURO 3" and "EURO 4" regulations on low emission levels, and that run on light fuels with up to 0,5% sulphur content.

Properties

- Avoids segment sticking by dispersing mud, varnishes and other high temperature oil oxidation products.
- Contains efficient corrosion, oxidation, rust and foam formation inhibitors.
- Avoids cylinder liner polishing typical in over-fuelled, high power engines, with the consequent reduction of specific consumption.
- Excellent detergent capacity that reduces deposits in valves and pistons.
- Very good dispersing qualities that prevents the appearance of mud when cold.
- A highly stable alkaline reserve (TBN) gives great capacity to neutralise the acids formed in the fuel.
- Good cold-flow which facilitates ignition and reduces engine wear.
- Highly stable multi-grade oil with excellent shear resistance.

Quality levels, approvals and recommendations

- ACEA E5, E7
- API CI-4, CH-4/SL
- CATERPILLAR CAT ECF-2/ECF-1-a
- MTU Type 2

Technical specifications

	UNIT	METHOD	VALUE
SAE Grade			15W-40
Colour	-	Visual	5
Density at 15 °C	g/cm3	ASTM D4052	0.874
Kinematic viscosity at 40 °C	cSt	ASTM D445	109
Kinematic viscosity at 100 °C	cSt	ASTM D445	14.8
CCS Viscosity at -20 °C	cP	ASTM D5293	<7,000
Viscosity index	-	ASTM D2270	141
Flash point, open cup	°C	ASTM D92	237
Pour point	°C	ASTM D97	-30
Noack volatility, 1h at 250 °C	% in weight	CEC L-40-93	<12
Shearing Inj.Bosch: Vis 100 °C (90 cy)	cSt	CEC L-14-93	>12.5
TBN	mg KOH/g	ASTM D2896	10.5

The above mentioned characteristics are typical values and should not be considered product specifications.