



Marine



Eni offers a line of lubricants for marine crosshead Diesel engines formulated from a high-quality base stock, additive-treated to guarantee superior cylinder lubrication of two-stroke crosshead diesel engines:

Low Speed	
Punica 570	Oil for the lubrication of two-stroke crosshead diesel engines operating with medium or high sulphur residual fuel oil
Punica 540	Oil for the lubrication of two-stroke crosshead diesel engines operating with low sulphur residual fuel oil
Cladium 50 SAE 40	Detergent lubricant formulated from an additive-treated high-quality base stock, suitable for use as crankcase oil in large crosshead engines. It can also be used as a stern tube lubricant.

Eni has developed a complete series of lubricants to satisfy the lubrication needs of four stroke marine diesel engines.

Medium Speed	
Cladium 120 SAE 30/40 API CF	Specifically formulated for naturally-aspirated or even highly supercharged marine diesel engines. Its additive package is suitably balanced in order to permit the use of either gasoil or marine diesel fuels, while ensuring top performance in engines with very high mean effective pressures. Despite its high detergent/ dispersant efficiency, the demulsibility characteristics allow rapid separation of water accidentally entering the engine.
Cladium 300 SAE 30/40 API CF	Lubricant for use in four-stroke diesel engines operating on residual fuels and under conditions which ask an oil with a medium-high TBN. The product is specifically designed for diesel engines, which form significant amounts of acid mist versus a low power or stop-and-go activities.
Cladium 400 SAE 30/40 API CF	Four-stroke engine oil for use in diesel engines that operate with a high sulfur content, thus requiring a particularly high TBN, particularly in operating conditions. It has so much calcium carbonate reserve in order to fight efficiently the formation of acid mists as a result of the use of fuel oil with a very high sulfur fuel. This reserve is also particularly useful in engines with very low oil consumption or operating at such low temperatures to promote sulfuric acid condensation
Cladium 400 SAE 30/40 API CF	Specifically formulated lubricant for naturally-aspirated or even highly supercharged marine diesel engines, operating on either gasoil, Marine Diesel Oil, Light Fuel Oil (LFO), vegetable oil, or for dual fuel gas engines, according to engine manufacturer's recommendations
Cladium 300 S SAE 30/40 API CF	Marine engine oils of the latest generation intended for use in those modern four-stroke diesel engines operating with high-sulphur fuels which require lubricants of higher performances, namely with 'anti black sludge' properties. This lubricant provides also better deposit control in the hottest parts of the engine, namely in the piston cooling gallery.
Cladium 400 S SAE 30/40 API CF	Lubricant for use in 4-stroke diesel engines that operate on residual fuels. The product is specifically designed for diesel engines, which form significant amounts of acid mist versus a low power or stop-and-go activities. Good water separation features enable efficient separation of water that enters the engine by mistake.
Cladium 500 S SAE 40 API CF	Lubricating oil for diesel engines, both with and without turbo charging, under the most severe conditions which are subject to precipitation or have excessive wear because of their design or available fuel. Suitable as motor oil in large crosshead engines with oil-cooled pistons.

To complete the line for the marine sector, Eni provides a line of lubricants to satisfy further lubricating needs in engines for special on board applications, such as life and rescue boats and auxiliary and emergency generators. The most important products are:

i-Sigma Top 10W-40

ACEA E4, E7 API CF Volvo VDS-3 MTU type 3 MAN M 3277 DAF Extended Drain Cummins CES 20072 Voith Retarder Oil Class A MB-Approval 228.5 Renault RVI RLD-2 ZF TE-ML 04C MACK EO-N Scania LDF-3 Deutz DQC III-10

10W-40 gradation enables Eni i-Sigma top 10W-40 to be suitable for any weather condition allowing easy cold starting. Eni i-Sigma top 10W-40 is officially approved or meets the requirements of the service specifications of most manufacturers particularly for Scania engines. The large percentage of additives adopted enables very long life between oil drains and the product is also indicated in case of discontinuous engine operation.

i-Sigma Performance E7 15W-40

ACEA E7, E5, E3, B3 API CI-4/CH-4/SL MB-Approval 228.3 Deutz DQC III-05 MAN M 3275-1 MTU type 2 Volvo VDS-3 MACK EO-N Deutz DQC III-10 Cat ECF-1a, EFC-2 Renault RVI RLD-2

Long-drain multigrade oil for diesel engines operating under severe duty. The superior quality of the base stock and the large percentage of additives used enable very long life in service. The oil can also be used, with a wide margin of quality, in previous generation diesel engines installed in vehicles engaged on urban and short-haul goods and passenger service.

i-Sigma Performance E3 15W-40

ACEA E3 API CG-4 MB 228.1 MAN M 3275-1 MTU type 2

Its detergent-dispersant properties, combined with its very high, long-lasting ability to neutralize acidic products of combustion, confirmed by the compliance with requirements of ACEA E5, E3, B3 e API service CH-4, SJ, keep pistons exceptionally clean, while solid combustion products are held in suspension, thus preventing the formation of harmful crankcase deposits.

i-Sigma Universal 15W-40

API CG-4/SL ACEA E2, A3/B3-04 MB 228.1, 229.1 MAN 271

S.H.P.D. multigrade long oil-drain engine lubricant suitable for the lubrication of supercharged diesel engines operating under severe duty; it is also suitable for the lubrication of all gasoline car engines, either naturally aspirated or turbocharged, thus offering an ideal choice for the lubrication of mixed fleets.

The superior quality of the base stock used and the large percentage of additives adopted enable long drainage intervals.





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