



MADE IN HOLLAND

TECHNICAL DATA SHEET

ENDUROX FLD

SEMI- AND FULL SYNTHETIC TRUCK ENGINE OILS

Description

Endurox FLD is an extra high performance diesel engine oil specially developed for use in modern, high output, low emission engines meeting Euro IV & V & US 2007 on-highway exhaust emission standards. We offer this range in a semi synthetic blend; SAE 15W/40 and two full synthetic blends. Endurox FLD does not only meet the unique needs of these new engines and enhances the life of exhaust after treatment devices, but also provides improved protection to older engines and is formulated with state-of-the-art additive technology and severely hydro processed base oils to provide outstanding performance and overall protection. Endurox FLD exceeds the performance requirements of API CJ-4 service categories and is approved by major global OEM's like Volvo, Mack, Cummins, etc.

Endurox FLD has outstanding thermal and oxidative stability that reduces low-temperature sludge build-up, high-temperature deposits and oil thickening. Excellent soot handling capability minimizes soot related viscosity increase and leads to longer engine/oil life. Outstanding corrosive and abrasive wear protection extends life of engine components and superior shear stability maintains viscosity in severe high-temperature service and leads to improved wear protection. Exceptional TBN retention resists harmful effects of corrosive exhaust gases and extends oil life and low ash content reduces particulate build-up in Diesel Particulate Filter (DPF) and enhances its life.

Benefits

Endurox FLD is applicable for the latest high performance low emission engines including those equipped with Diesel Particulate Filter DPFs and Exhaust Gas Recirculation (EGR) and meeting Euro IV & V & US 2007 on-highway exhaust emission standards. Also applicable for on-highway vehicles and off-highway equipments operating in severe low speed/heavy load conditions using ultra low (15 ppm) sulphur fuels and for high performance gasoline engines and mixed fleet operations requiring oils meeting API CJ-4 performance levels.

Performance level

- API CJ-4
- ACEA E9/E7
- MB 228.31
- Volvo VDS-4
- MAN M3575
- Renault VI RLD-3
- DCC PGQS 93K218
- Cummins CES 20081
- Mack EO-O +
- Caterpillar ECF-3/ ECF-2 / ECF-1a
- Deutz DQC III-05





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Typical Properties

SAE		10W/40 FULL SYNTHETIC	10W/30 FULL SYNTHETIC	15W/40 SEMI SYNTHETIC
Density 15 °C	kg/m ³	872	866	861
Viscosity 40 °C	cSt	114	78.8	113
Viscosity 100 °C	cSt	14.1	11.6	14.9
Viscosity CCS -20 °C	cP			<7000
Viscosity CCS -25 °C	cP	<7000	<7000	
Viscosity Index		125	140	135
Pour point	°C	-27	-42	-27
Flash point C.O.C.	°C	201	205	201
TNB	mg KOH/g	8.4	7.3	8.4
Sulphated Ash	%wt	0.96	0.99	0.96
Operating Temperature	°C	-25/150	-35/150	-25/150