

RUBIA OPTIMA 1100 FE 10W-30

DIESEL ENGINE OIL

KEY DATA



SPECIFICATIONS AND APPROVALS

International Specifications:

ACEA E7, E9

API CK-4/CJ-4/CI-4 plus/CI-4/CH-4

Manufacturers' Approvals:

- ✓ MB-Approval 228.31
- ✓ Mack EO-S 4.5
- ✓ Volvo VDS-4.5
- ✓ Renault Trucks RLD-3
- ✓ Cummins CES 20086
- ✓ Detroit Diesel DFS 93K222
- ✓ Ford WSS-M2C171-F1

Meets the Requirements of:

- ✓ DAF
- ✓ IVECO

TECHNOLOGY

Inno-Boost technology

Ready for the next chapter of engine technology.

With the Inno-Boost Technology, formulations incorporate right combination of strong anti-oxidant molecules. These active molecules inhibit radical formation and keep the hydrocarbon chains intact. As a result, the engine oil viscosity remains stable and keeps its properties for longer time.



APPLICATIONS

TOTAL RUBIA OPTIMA 1100 FE 10W-30 is developed for the **newest on-road diesel engines** and suitable for existing diesel engines due to its **backwards compatibility**.

With its "**low-SAPS**" (low sulphated ash, phosphorus and sulphur) technology, TOTAL RUBIA OPTIMA 1100 FE 10W30 protects engines equipped with any kind of **post-treatment systems**, such as diesel particulate filters (DPFs).

TOTAL RUBIA OPTIMA 1100 FE 10W-30 enables **coverage of a fleet of mixed brands**, with only one product

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PERFORMANCES AND CUSTOMER BENEFITS

TOTAL RUBIA OPTIMA 1100 FE 10W-30 is formulated with **excellent shear stability**, thus maintaining its viscosity in highly loaded contacts and strong engine protection under severe conditions. TOTAL RUBIA OPTIMA 1100 FE 10W-30 has **improved oxidation stability** that disrupts oxidation reactions, prevents formation of harmful sludge and protects hotter engines.

TOTAL RUBIA OPTIMA 1100 FE 10W-30 is designed to **control aeration**, limiting the formation of air bubbles in the lubricants for a better engine efficiency. High quality base stocks combined with high-performance additives make TOTAL RUBIA OPTIMA 1100 FE 10W-30 an **exceptional technical performances lubricant**. Advanced additives keep the engine's most sensitive parts clean thanks to **detergent, dispersant and anti-wear properties**, added to effective control of soot, sludge and deposits.

PHYSICAL AND CHEMICAL CHARACTERISTICS *

TEST	UNIT	TEST METHOD	VALUE
Density at 15 °C	kg/m ³	ASTM D1298	869.9
Kinematic Viscosity at 40 °C	mm ² /s	ASTM D445	82.61
Kinematic Viscosity at 100 °C	mm ² /s	ASTM D445	12.19
Viscosity Index	-	ASTM D2270	143
Flash Point	°C	ASTM D92	221
Pour Point	°C	ASTM D97	-36
T.B.N	mgKOH/g	ASTM D2896	10
Sulphated Ash	% m/m	ASTM D874	0.99

* The features mentioned above are average values obtained with some variability in production and do not constitute a specification.

RECOMMENDATIONS FOR USE

Before using the product, it is important to check the service manual of the vehicle: the drain is carried out according to the manufacturer's requirements. The product should not be stored at a temperature above 60 °C. Exposure to strong sunlight, extreme cold or high temperature variations must be avoided. All packages should be protected from bad weather conditions. The drums should be stored horizontally to avoid a possible contamination by water and the damage of the product label.

HEALTH, SAFETY AND THE ENVIRONMENT

Based on available information, this product does not cause adverse health effects when used in the intended application and the recommendations provided in the Safety Data Sheet (MSDS) are followed. It is accessible on request from your local dealer or on the website <http://sdstotalms.total.com>. This product should not be used for applications other than those for which it is intended. If disposing of used product, take care to protect the environment and comply with local regulations.