



# RUBIA OPTIMA 1100 15W-40



*Mineral lubricant for **diesel** engines, suitable for use in **on road** applications, based on the latest API CK-4 specification.*

## SPECIFICATIONS AND APPROVALS

### International specifications

API CK-4

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

ACEA E9-16/E7

### Meets Manufacturers' Specifications\*

- MACK EO-O Premium Plus
- VOLVO VDS-4
- CUMMINS CES 20081
- DETROIT DIESEL DFS 93K218
- MB 228.31
- MAN M3575
- RENAULT RLD-3

## APPLICATIONS

TOTAL RUBIA OPTIMA 1100 15W-40 is developed for the **newest North American 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 15W-40 protects diesel engines equipped with **post-treatment systems** such as diesel particulate filters (DPFs).

TOTAL RUBIA OPTIMA 1100 15W-40 enables **coverage of a fleet of mixed brands**, with a minimal number of products.

## PERFORMANCES AND CUSTOMER BENEFITS

TOTAL RUBIA OPTIMA 1100 15W-40 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 15W-40 has **improved oxidation stability** that disrupts oxidation reactions, prevents formation of harmful sludge and protects hotter engines.

TOTAL RUBIA OPTIMA 1100 15W-40 is designed to **control aeration exceptionally**, which is important in cooling and protecting engines at higher temperatures and pressures.

**Exceptional detergent, dispersant and anti-wear additives** keep the engine's most sensitive parts clean and enable effective control of soot, sludge and piston deposits.

The "**low-SAPS**" formulation of TOTAL RUBIA OPTIMA 1100 15W-40 improves the post-treatment system durability, preventing the clogging of the diesel particulate filter.

## PHYSICAL AND CHEMICAL CHARACTERISTICS\*

### TOTAL RUBIA OPTIMA 1100 15W-40

		Method	Value
Density at 15°C	kg/m <sup>3</sup>	ASTM D1298	877
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	118.2
Kinematic Viscosity at 100°C	mm <sup>2</sup> /s	ASTM D445	15.47
Viscosity Index	-	ASTM D2270	137
Flash point	°C	ASTM D92	234
Pour point	°C	ASTM D97	-30
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

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 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 [www.quickfds.com](http://www.quickfds.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.

\* OEM approvals for the NEW API specification are in process and will be added upon completion of approval process.