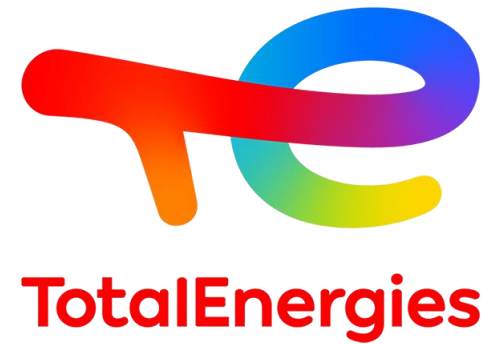


RUBiA
ENGINE OIL



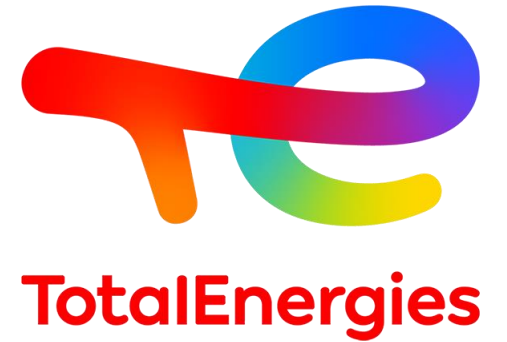
Rubia Optima 3100 Product guide

200+
APPROVALS
FROM
**HEAVY VEHICLE
MANUFACTURERS***

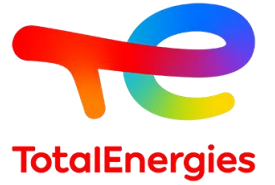
* For Rubia range in its entirety

Contents

- **What's new about this upgrade?**
- **Range specifications & approvals**
- **Customer benefits**
- **Competitor benchmark**
- **Route-to-Market**
- **Pricing strategy**
- **Communication assets**
- **F.A.Q.**



What's new



- ☑ Replacing Rubia TIR 8900 range (FE 10W-30 & 10W40)
- ☑ Upgrade to API CK-4
- ☑ Incorporating additional OEM homologations + specifications*



Mercedes-Benz

MB-Approval 228.52



VOLVO TRUCKS

Volvo VDS-4.5



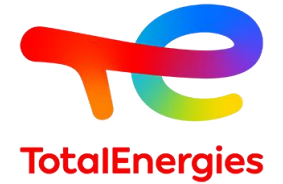
MACK

Mack EOS-4.5



Cummins CES 20086

What's new



Mercedes-Benz

MB-Approval 228.52

- Designed for use in select Euro VI / US Tier 4 engines used in buses and industrial applications where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted
- Compared to MB 228.51, MB 228.52 has a restriction on the level of calcium allowed in the lubricant and is designed for use in select applications/engines mentioned above



VOLVO TRUCKS



Volvo VDS-4.5 Mack EOS-4.5

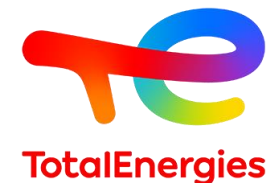
- Designed for use in high performance medium and heavy-duty diesel engines where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted
- Volvo and Mack vehicles that require this lubricant specification would typically align with Euro VI and Stage V emissions standards in Europe and EPA GHG 2016 and U.S. Tier 4 Final emissions standards in the USA



Cummins CES 20086

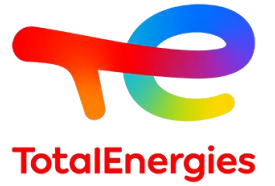
- Can be used in applications where Exhaust Gas Recirculation (EGR) and advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted and ultra-low sulfur diesel is available
- Engines that require this lubricant specification would typically align with Stage IIIB, IV and V European off-highway emissions standards and the Tier 4 Final North American emissions standard
- Recommended by Cummins for use anywhere CES 20081 was previously recommended

Range approvals & specifications



Trade Name	International specifications	OEM Approvals	Meets the requirements of	Suitable for
<p>Rubia Optima 3100 FE 10W-30</p>	<p>ACEA E6, E7, E8, E9, E11 API CK-4/CJ- 4/CI-4/CH-4/SN</p>	<ul style="list-style-type: none"> ✓ MB-Approval 228.51 / 228.52 ✓ Mack EO-S 4.5 ✓ Volvo VDS-4.5 ✓ Renault Trucks RLD-3 ✓ Cummins CES 20086 	<ul style="list-style-type: none"> ✓ DAF ✓ DDC DFS 93K222 	<ul style="list-style-type: none"> ✓ IVECO
<p>Rubia Optima 3100 10W-40</p>	<p>ACEA E6, E7, E8, E9, E11 API CK-4/CJ- 4/CI-4/CH-4/SN</p>	<ul style="list-style-type: none"> ✓ MB-Approval 228.51 / 228.52 ✓ Mack EO-S 4.5 ✓ Volvo VDS-4.5 ✓ Renault Trucks RLD-3 ✓ Cummins CES 20086 	<ul style="list-style-type: none"> ✓ DAF ✓ DDC DFS 93K222 	<ul style="list-style-type: none"> ✓ FPT IVECO CATEGORY TLS CK-4 ✓ FPT IVECO CATEGORY TLS E9

Customer benefits



Developed for latest engines (Euro V, Euro VI, China VI, BS-VI) and backwards compatible



Providing peace of mind

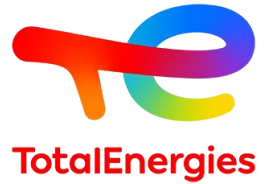


Covering several OEM requirements with only 1 product



Reducing Total Cost of Ownership (T.C.O.)

Why choose Rubia Optima 3100 range



Approved by Heavy Duty Vehicle Manufacturers (OEMs)



Allows maximum Oil Drain Intervals (ODI)



Reduces fuel consumption*

**For FE 10W-30*



Exceeds API CK-4 standards



Rationalization solution for multi-branded fleets

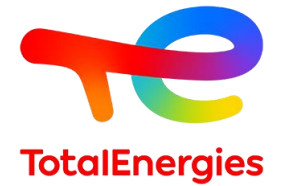


Compatible with natural gas engines



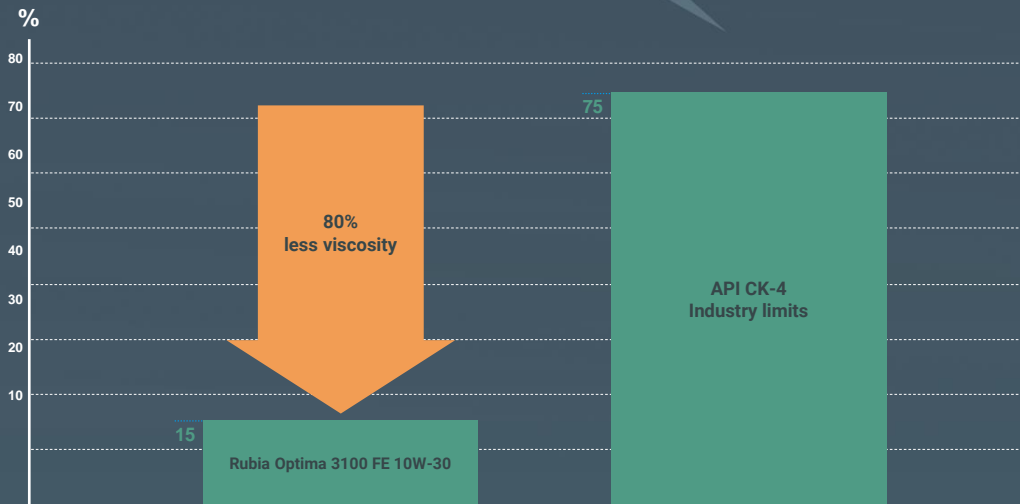
Meeting latest ACEA oil sequences E8, E11

Why choosing Rubia Optima 3100 range

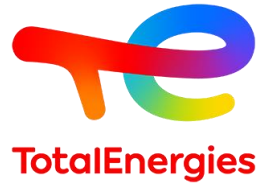


Formulated with Inno-Boost Technology
Providing up to 80% improvement
against oil viscosity increase*

* Volvo T13 Test (KV 40 Viscosity Increase 300-360h)



Route to market*



OEM dealers

Covering multi-branded fleets



Transport fleets

All generation engines

Multi-branded fleets



Bus & coach fleets

All generation engines

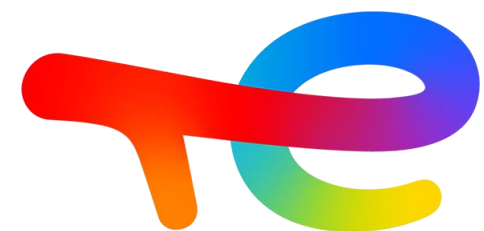
Multi-branded fleets



Independent / branded workshops

All generation engines

Do it for myself (DIFM)



TotalEnergies

lubricants.totalenergies.com