



TRANSMISSION AXLE 8 FE 75W-140

Transmission Oil

KEY DATA

SYNTHETIC OIL FOR GEARS

SAE 75W-140

INTERNATIONAL STANDARDS

✓ API GL-5

MANUFACTURER APPROVALS

✓ SCANIA STO 1:0

APPLICATIONS

TOTAL TRANSMISSION AXLE 8 FE 75W-140 is a very high performance 100% synthetic oil for axles and reduction gears and high loaded gears.

TOTAL TRANSMISSION AXLE 8 FE 75W-140 is recommended when filters are added to the lubrication system.

TOTAL TRANSMISSION AXLE 8 FE 75W-140 is recommended for SCANIA axles requiring API GL-5 level.

CUSTOMER BENEFITS

- **Reduced fuel consumption** in comparison with standard lubricants due to TOTAL's Fuel Economy technology.
- **Reduced cost of maintenance:** specially formulated to reach the drain intervals recommended by the manufacturer.
- **Improved protection of axles** against wear and corrosion due to extreme-pressure properties of oil.
- **Improved driver start up experience:** low temperature fluidity due to a high viscosity index, generating benefits during cold starts and limiting drag losses and fuel consumption.
- **Improved stability in operation** due to high viscosity index
- **High compatibility with oil filters** due to antifoam properties

CHARACTERISTICS*

Test	Unit	Test method	Result
Volumetric mass at 15°C	kg/m ³	DIN 51757 D	885
Viscosity at 40°C	mm ² /s	ASTM D445	183
Viscosity at 100°C	mm ² /s	ASTM D445	26
Viscosity index	-	ASTM D2270	178
Viscosity Brookfield at -40°C	mPa/s		130 000
Pour point	°C	ASTM D97	- 45

* The characteristics given above are obtained with a standard tolerance threshold during production and may not be considered specifications.

RECOMMENDATIONS FOR USE

Before using the product, the vehicle's maintenance guide should be checked. Oil changes should be carried out in accordance with the manufacturer's recommendations.

The product should not be stored at temperatures over 60°C. It should be kept away from sunlight, intense cold and extreme temperature fluctuations.

If possible, the packaging should not be exposed to the elements. Otherwise, the drums should be laid horizontally in order to avoid any contamination from water and to prevent the product's label from rubbing off.

HEALTH, SAFETY AND THE ENVIRONMENT

Based on the toxicological information available, this product should not cause any adverse health effects, provided it is used for its intended purpose and in accordance with the recommendations laid out in the Safety Data Sheet. This can be obtained on request from your local reseller and is available for consultation at www.quickfds.fr.

This product should not be used for any purposes other than the ones for which it is intended.

When disposing of the product after use, please protect the environment and comply with local regulations.



RUBIA OPTIMA 1100 15W-40



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

SPECIFICATIONS AND APPROVALS

International specifications

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

ACEA E9/E7

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

APPLICATIONS

TOTAL RUBIA OPTIMA 1100 15W-40 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 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 only one product.

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**, limiting the formation of air bubbles in the lubricants for a better engine efficiency.

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 ³	ASTM D1298	877
Kinematic Viscosity at 40°C	mm ² /s	ASTM D445	118.2
Kinematic Viscosity at 100°C	mm ² /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.

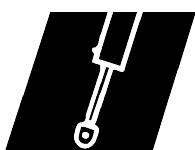
HEALTH, SAFETY AND ENVIRONMENT

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

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.

EQUIVIS ZS



Lubrication



High viscosity index anti-wear hydraulic oils.

APPLICATIONS

Hydraulic systems

- **EQUIVIS ZS** range is recommended for all kind of hydraulic systems operating under high pressure (limit as indicated by the pump manufacturer) and high temperature.
- Lubricants especially suitable for hydraulic systems working under extreme temperature variations and equipment operating outside : easy start up at low temperature and regular operating in all seasons : civil engineering, agriculture, marine, transport and other industrial applications.

SPECIFICATIONS

International specifications

- AFNOR NF E 48-603 HV
- ISO 6743/4 HV
- DIN 51524 P3 HVLP
- VICKERS M-2950S, -I-286

ADVANTAGES

Long equipment life time High operating reliability

- Very high viscosity index
- Good shear stability.
- Superior thermal stability avoiding the formation of sludge even at high temperature.
- Very good oxidation stability ensuring a long service life of the fluid.
- High protection against wear insuring maximum equipment life.
- Excellent hydrolytic stability avoiding filter blocking.
- Remarkable filterability even in the presence of water.
- Excellent protection against rust and corrosion.
- Good anti-foam and air release properties by using **silicon free** components.
- Very low pour point.
- Good demulsibility ensuring rapid water separation.

TYPICAL CHARACTERISTICS	METHODS	UNITS	EQUIVIS ZS					
			15	22	32	46	68	100
Appearance	Internal	-	Clear liquid					
Density at 15°C	ISO 3675	kg/m ³	858	861	870	874	882	885
Viscosity at 40°C	ISO 3104	mm ² /s	15	22	32	46	68	100
Viscosity at 100°C	ISO 3104	mm ² /s	3.7	5.1	6.5	8.4	11.2	15.6
Viscosity index	ISO 2909	-	151	164	160	161	161	165
Cleveland flash point	ISO 2592	°C	174	202	208	215	220	230
Pour point	ISO 3016	°C	- 42	- 42	- 39	- 39	- 36	- 36
FZG (A/8, 3/90) - fail stage	DIN 51354	-	-	-	10	11	11	-
Filterability index (IF)	NF E 48-690	-	1.05	1.02	1.09	1.02	1.09	1.05
Shear resistance 250 cycles								
Viscosity loss @ 40°C	DIN 51382	%	-	-	3	5	8	-

Above characteristics are mean values given as an information.

TOTAL LUBRIFIANTS Industrie & Spécialités

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EQUIVIS ZS

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This lubricant used as recommended and for the application for which it has been designed does not present any particular risk.

A material safety data sheet conforming to the regulations in use in the E.C. can be obtained from your local commercial adviser or down loaded from www.quick-fds.com.