

THE VALUES SHOWN REFER TO NORMAL INDUSTRIAL PRODUCTION. THEY ARE APPROXIMATE AND SUBJECT TO POSSIBLE VARIATIONS AND IMPROVEMENT AND DO NOT CONSTITUTE TECHNICAL SPECIFICATION.



November 5, 2013

## DESCRIPTION

EURO standards, ever more severe in relation to air pollutant emissions, especially with regard to the presence of particulate, are bringing engine manufacturers to make important changes to their propulsion systems in order to comply with European standards. EGR systems are today well-established, as are particulate 'traps' (DPF). Engines are becoming ever more delicate and the lubricants in charge of ensuring engine efficiency must protect all parts having relative motion, while, at the same time, help reduce the pollutants.

## PROPERTIES

**SYNECO K-E5** guarantees the protection of exhaust gas post treatment systems, along with the reduction of the amount of sulphated ashes deriving from combustion of traces of engine lubricant. It protects couplings against abrasive wear by creating a thin lubricant layer by means of a specific additivation.

**SYNECO K-E5** keeps fuel injection systems clean and perfectly efficient, thus reducing the amount of NOx, a cause of lubricant degradation.

Thanks to a modern detergent-dispersal additivation, it reduces the abrasive effect due to the building up of carbon residues that derive from the EGR system.

Recent problems observed in state-of-the-art engines, the increase in the amount of lead present in the lubricant caused by corroding bushings, don't allow the use of lubricants with a low content of ashes. These have to be replaced before reaching 60.000 Km intervals because of the abovementioned reasons, while **SYNECO K-E5**, compliant with MAN 3377 specification, allows to keep the oil change interval to over 100,000 Km intervals on MAN vehicles, with twice as long a lifespan compared to oils with a low ash content such as ACEA E6.

**SYNECO K-E5** is a fully synthetic product and allows perfect cold pumpability, guaranteeing an immediate lubrication even when starting up at low temperatures, thus counteracting wear of the mechanical components.

## APPLICATIONS

**SYNECO K-E5** is recommended for high and medium-powered Diesel engines equipped with exhaust gas treatment systems (DPF and SCR).

## CERTIFICATIONS AND LEVELS

Apr. MB 228.5, MAN 3277 and **MAN 3377**. Lev: ACEA E4,E7-08; API CI-4; MTU Type 3; Volvo VDS-3; Renault RXD/RLD-2; Mack EO-M+; CUMMINS CES 20078; CAT ECF-2 C13; Deutz DQC IV-10 Global DHD-1, Detroit Diesel 93K215.

## TECHNICAL CHARACTERISTICS

CHARACTERISTIC	UNIT	VALUE	METHOD
Specific weight 15°C	kg/l	0,860-0,880	ASTM D297
Viscosity at 100°C	cSt	12,5-16,3	ASTM D445
Viscosity at 40°C	cSt	85-123	ASTM D445
Viscosity index		135-150	ASTM D 2270
TBN	mg KOH/g	12,6	