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## PRODUCT INFORMATION **GERMAN ADLER SYNT SAE 10W-40 HC-LA**

Low-SAPS fuel economy UHPD motor oil made from HC-synthesis base oils which meets par excellence the highly exalted tribological requirements of the *EURO 5- and EURO 6* - commercial car engine generation. Especially developed for modern diesel engines equipped with exhaust after treatment devices and extended drain intervals.

### Description

GERMAN ADLER SYNT SAE 10W-40 HC-LA is an Ultra-High-Performance-Diesel (UHPD) engine oil with reduced Sulphated Ash, Phosphorus and Sulphur content (low-SAPS).

### Application

GERMAN ADLER SYNT SAE 10W-40 HC-LA has been specially designed for the use in highly loaded diesel engines with extended drain intervals and modern exhaust after treatment devices. In compliance to manufacturer instructions it's recommended for use in vehicles equipped with diesel particulate filters (PM-trap), SCR-catalyst (Selective Catalytic Reduction) and extended EGR-rates (exhaust gas recirculation). Its modern design provides a broad range of application and ensures reliability operation even under severe conditions.

In compliance to EEC regulations the quality of GERMAN ADLER SYNT SAE 10W-40 HC-LA is equivalent according to the following standards / specifications:

- ACEA E7/E8/E11
- API CK-4
- CAT ECF-3
- Cummins CES 20086
- DAF
- DDC 93K222
- Deutz DQC IV-18 LA
- Jaso DH-2
- John Deere JDQ-78X
- Mack EO-S 4.5
- MAN M 3477, M 3775, M 3575
- MB MB 226.9/228.31/MB 228.51
- MTU Typ 3.1
- Renault VI RLD-3
- Renault Truck RXD/RGD
- Scania LA
- Volvo CNG/VDS 4.5

### Advantages/Benefits

- Preserves exhaust gas treatment devices by reduced sulphated ash levels and low content of phosphorus and sulphur (low SAPS).
- Offers extended drain intervals potential in accordance to manufacturer instructions.
- Fuel-economy characteristics.
- Reliable all-season operation due to excellent viscosity-/temperature behavior and high shear stability.
- High wear protection even under continuous stress at full engine load.
- Very high oxidation resistance due to selected HC-synthesis base oils and extraordinary additive technology.
- Protects against corrosion and black sludge.
- Reduced oil consumption.
- Miscible and compatible with conventional, also as synthetic branded engine oils. To make use of the full performance benefit of GERMAN ADLER SYNT SAE 10W-40 HC-LA a complete oil change is recommended.

### Typical characteristics:

	Unit	Value	Method
<b>Density at 15°C</b>	kg/m <sup>3</sup>	857	DIN 51 757
<b>Viscosity at 40°C</b>	mm <sup>2</sup> /s	100	DIN 51 562
<b>Viscosity at 100°C</b>	mm <sup>2</sup> /s	15,4	DIN 51 562
<b>Viscosity index</b>		163	DIN ISO 2909
<b>Dynamic viscosity at -25°C</b>	mPa.s	4550	DIN 51 377
<b>Pour point</b>	°C	-33	DIN ISO 3016
<b>Flash point</b>	°C	230	DIN ISO 2592
<b>TBN</b>	mg KOH/g	9,3	DIN ISO 3771
<b>Sulphated ash</b>	mass.-%	0,96	DIN 51 575
<b>Sulphur</b>	mass.-%	0,28	
<b>Phosphorus</b>	mass.-%	0,08	

The above data are true and correct to the best of our knowledge and belief and reflect the current state of knowledge and our development effort. All rights to changes reserved! The characteristic data indicated are subject to the repeatability and reproducibility of the given test methods.