



PRODUCT DATA SHEET

Havens Robusta HD API CI-4/SL ACEA E7

DESCRIPTION

Havens Robusta HD is a high-performance lubricant used in on-road diesel technology. Contains excellent viscosity stability in service, guaranteeing effective engine lubrication in severe conditions. Outstanding detergent, dispersant and anti-wear properties keep the engine clean and enable efficient control of soot, sludge and piston deposits.

PROPERTIES

- High thermal and oxidation stability
- Advanced detergency and dispersancy
- Excellent low temperature properties
- TBN reserves

APPLICATIONS

It is recommended for Euro 3, and previous engines of most European and American manufacturers. It is also adapted to Euro 5 and previous engines of some manufacturers with appropriate oil drain intervals. Recommended for use in a wide range of heavy-duty applications and operating environments found in the on-road transport and off-road mining, forestry, construction and agricultural industries.

PERFORMANCE LEVELS

Meets and exceeds:

ACEA E7-12 (2012); ACEA A3/B4-12 (2012) ; API CI-4 ; API CH-4 ; API CG-4; API CF-4; API CF; API SL; MB-Approval 228.3; MB-Approval 229.1; Volvo VDS-3; Renault Truck RLD-2; Mack EO-N; Mack EO-M Plus; MAN M 3275; Cummins CES 20076; Cummins CES 20077; Cummins CES 20078; CAT ECF-2; CAT ECF-1-a; MTU Type 2; Deutz DQC III-10 ;Detroit Diesel DDC 93K215; Global DHD-1.

TYPICAL PROPERTIES

PARAMETERS	TEST METHOD	UNIT	Havens Robusta HD	
Viscosity Grade			10W40	15W40
Density @ 15°C	ASTM D1298	kg/l	0.866	0.875
Viscosity @ 100°C	ASTM D445	cSt	13.5	15.7
Viscosity @ 40°C	ASTM D445	cSt	89	120
Viscosity Index (min)	ASTM D2270	-	150	140
Cold Crank Simulator	ASTM D5293	cP	<7,000 @ -25 °C	<7,000 @ -20 °C
Pour Point	ASTM D97	°C	-36	-34
Flash Point	ASTM D92	°C	225	220
Total Base Number (TBN)	ASTM D2896	mg KOH/g	11	11



The values shown above are typical values at the date of publication. Havens Lubricants reserves the right to change these typical values without prior notice.

HEALTH & SAFETY, ENVIRONMENT:

Prolonged and repeated contact with oil may cause skin disorders. Avoid contact. Wash immediately with soap and water. Do not discharge used oil in to drains or the environment. Dispose to an authorized used oil collection point. For further Information on Safety Guidelines please refer to MSDS available on our website www.havenslubricants.com.

