

HyFilm® LEO Heavy Duty SAE 5W-40 Engine Oil

 Lubricants for a Healthier Planet™

HyFilm® LEO Heavy Duty uses advanced technology to protect modern diesel engines in harsh environments while maximizing fuel economy and extending service intervals, making it the engine oil of choice for sustainable fleets. **HyFilm LEO Heavy Duty** meets the latest API specifications for both diesel and gasoline engines as well the OEM requirements for Cummins, Mack, Volvo, Detroit Diesel, and other heavy duty engine manufacturers. Designed to meet the rigorous demands of modern high output, low emissions engines, **HyFilm LEO Heavy Duty** is also backward compatible to provide lubrication across the entire range of 4-stroke diesel engines.

HyFilm LEO Heavy Duty SAE 5W-40 Official Approvals:

API CK-4, CJ-4, CI-4	API SN	Renault VI RLD-3
Volvo VDS-4.5	Mack EOS-4.5	

HyFilm LEO Heavy Duty SAE 5W-40 Meets or Exceeds:*

DDC Power Guard 93K222	Mercedes Benz 228.31	MTU Type 3.1
Cummins CES 20086	Mercedes Benz 228.51	MAN 3575†
Caterpillar ECF-3	Deutz DQC III-10 LA, IV-10 LA	JASO DH-2
ACEA E9	Ford WSS-M2C171-E	

* Guaranteed to meet or exceed specifications, not officially licensed.

† Meets or exceeds engine test requirements only

PRODUCT ATTRIBUTE	TEST METHOD	TYPICAL PROPERTIES
SAE Grade	SAE J300	5W-40
Kinematic Viscosity, cSt @ 40°C	ASTM D445	95.9
Kinematic Viscosity, cSt @ 100°C	ASTM D445	15.4
Viscosity Index No.	ASTM D2270	170
CCS Viscosity, cP @ -30°C	ASTM D5293	6,300
High Temp High Shear Viscosity, cP @ 150°C @ 10 ⁶ s ⁻¹	ASTM D4683	4.1
Density, kg/l @ 15.5°C	ASTM D1298	0.856
Pour Point, °F (°C)	ASTM D97	-44 (-42)
Flash Point, °F (°C)	ASTM D92	444 (229)
Noack Volatility, % wt. loss	ASTM D5800	11
TBN (Total Base Number)	ASTM D2896	10.5
TBN (Total Base Number)	ASTM D4739	7
Sulfated Ash, % wt.	ASTM D874	0.9
Sulfur, % wt.	ASTM D4951	0.27
Phosphorus, %wt,	ASTM D4951	0.077
Color		Amber

WARRANTY:

When properly stored and used in accordance with instructions, any material not satisfactory will be replaced with any product in our line on a dollar for dollar basis provided the account is paid in full when due and Hydrotex is notified in writing within 12 months of the date of the order by the customer.

Hydrotex® is a manufacturer and distributor of high performance lubricant and fuel improver solutions. As an employee owned company, we help our customers develop sustainable solutions designed to improve system reliability, save energy, limit pollution, extend fixed asset life, reduce maintenance costs and improve fuel efficiency. Our products and services leverage over 80 years of innovation resulting in superior lubrication solutions and high touch customer service.