



## **Super-D™ 3 Diesel Engine Oil – Multigrades**

Kendall Super-D™ 3 multigrade diesel engine oils are premium quality universal fleet engine oils specially designed for use in on-highway diesel trucks and off-highway diesel equipment, as well as in passenger cars and light trucks with either diesel or gasoline engines. They are formulated with proprietary additive chemistry that provides outstanding wear protection, soot control and bearing corrosion protection in both conventional and EGR-equipped diesel engines. Excellent soot dispersancy protects against abrasive wear and soot-induced oil thickening, and ensures good low-temperature pumpability, even with soot-laden oil. High dispersancy-detergency and a high alkaline reserve provide extra protection in extended drain or severe service intervals and in EGR-equipped engines.

Super-D™ 3 multigrades meet or exceed the requirements of API CI-4, CH-4, CG-4, CF-4, CF and SL. The SAE 15W-40 viscosity grade meets the stricter performance requirements for soot control and shear stability as defined by API CI-4 PLUS. Both multigrades meet or exceed the performance requirements for Caterpillar ECF-1, Cummins CES 20078, Mack EO-M Plus and Volvo VDS. The SAE 15W-40 viscosity grade meets the performance requirements of additional OEM specifications and worldwide standards, including Global DHD-1, Cummins CES 20078, DDC Powerguard 93K214, Mack EO-N Premium Plus 03, Mercedes-Benz Sheet 228.3 and Volvo VDS-3.

**Premium Universal  
Fleet Engine Oil**

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## ***Applications***

- On-highway diesel trucks equipped with EGR, ACERT or other technologies to meet today's stringent low-emissions requirements
- Older diesel equipment with conventional, non-EGR engines
- Mixed fleets with both diesel and gasoline-fueled vehicles
- Off-highway construction, earth moving and mining equipment
- Farm equipment with diesel or gasoline engines

Super-D<sup>™</sup> 3 multigrades meet or exceed the requirements of:

- API CI-4 PLUS (SAE 15W-40)
- API Service CI-4, CH-4, CG-4, CF-4, CF, SL
- ACEA E7-04, E3 (SAE 15W-40)
- Caterpillar ECF-1
- Cummins CES 20078 (both grades), CES 20077 (SAE 15W-40 only)
- Detroit Diesel PowerGuard 93K214 (SAE 15W-40), 7SE270 (4-stroke cycle engines)
- Global DHD-1 (SAE 15W-40)
- Mack EO-N Premium Plus 03 (SAE 15W-40), EO-M Plus (both grades)
- MAN 271, 3275 (SAE 15W-40)
- Mercedes-Benz Sheet 228.3 (SAE 15W-40)
- MTU MTL 5044 Type 2 (SAE 15W-40)
- Volvo VDS-3 & VDS-2 (SAE 15W-40), VDS (SAE 10W-30)
- Diesel engines manufactured by OEMs not listed above, including International (Navistar), John Deere, Hino, Komatsu, Kubota and others

## ***Features/Benefits***

- Outstanding soot control for protection against abrasive wear and soot-induced oil thickening
- Outstanding resistance to viscosity and thermal breakdown at high temperatures
- Exceptional wear protection
- Protects against engine sludge and varnish deposits
- Good low-temperature pumpability, even with soot-laden oil
- Excellent rust and bearing corrosion protection
- Excellent shear stability
- Good resistance to foaming and aeration
- Excellent protection for EGR-equipped engines and extended drain capability for non-EGR diesel engines

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**Super-D™ 3 Diesel Engine Oil – Multigrades**  
**Typical Properties**

<b>SAE GRADE</b>	<b>10W-30</b>	<b>15W-40</b>
<b>API Service</b>	<b>CI-4, CH-4, CG-4, CF-4, CF, SL</b>	<b>CI-4, CH-4, CG-4, CF-4, CF, SL</b>
<b>API CI-4 PLUS</b>	<b>n/a</b>	<b>Yes</b>
Density, g/cm <sup>3</sup> @ 15.6°C (60°F)	0.875	0.884
Pounds per U.S. Gallon @ 15.6°C (60°F)	7.30	7.38
Color, ASTM D1500	L 4.0	L 4.0
Flash Point (COC), °C (°F)	220 (428)	226 (439)
Pour Point, °C (°F)	-33 (-27)	-36 (-33)
Viscosity,		
cSt @ 40°C	78.2	118
cSt @ 100°C	11.9	15.3
SUS @ 100°F	400	609
SUS @ 210°F	67.2	80.8
Viscosity Index	142	138
Cold Cranking Viscosity, cP @ (°C)	6,700 (-25)	6,700 (-20)
High-Temp/High-Shear Viscosity, cP @ 150°C	3.6	4.3
Sulfated Ash, ASTM D874, wt %	1.48	1.48
Total Base Number (TBN), ASTM D2896	12.2	12.2
Zinc, wt %	0.145	0.145

**Health and Safety Information**

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

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