



CK-4 - Full Synthetic HDMO 5W40 (API CK-4/SN, TBN 9)

Our CK-4 Full Synthetic HDMO SAE 5W40 Diesel Engine Oil is formulated with a premium 100% high-viscosity index synthetic base stock, plus a special additive package designed for superior protection against wear, corrosion, oxidation and varnish with superior antishear properties designed to meet 2017 model year on-highway and TIER-4 non-road exhaust emission standards as well as for previous model year diesel engines.

- It provides enhanced protection against oil oxidation, viscosity loss due to shear, and oil aeration as well as protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits, degradation of low- and high-temperature properties and soot-related viscosity increase.
- Especially effective at sustaining emission control system durability where particulate filters and other advanced after treatment systems are used.
- In addition to API CK-4, these oils exceed the performance criteria of CJ-4, CI-4 with CI-4 Plus, CI-4, CH-4 and can effectively lubricate engines calling for those API Service Categories.
- When using this product in conjunction with fuel containing higher than 15 ppm of sulfur.(consult the engine manufacturer for service interval recommendations).
- Available in Bulk, 275Gall, 55Gall, 5Gall, 3/1Gall.



Typical Inspections

Method

Typical Results

Color	Visual	Brilliant, Amber
Density Lbs/Gal	Gardner	10.1
API Gravity	ASTM D-1298	32.92
Specific Gravity @ 15.6°C	ASTM D-1298	0.880
Viscosity Index	ASTM D-2270	154
Pour Point °C (°F)	ASTM D-97	-45 (-49)
Flash Point C.O.C. °C (°F)	ASTM D-92	252 (485.6)
Fire Point C.O.C. °C (°F)	ASTM D-92	256 (492.8)
Viscosity @ 40°C, cSt	ASTM D-445	93.1
Viscosity @ 100°C, cSt	ASTM D-445	14.1
Sulfated Ash, wt%	ASTM D-874	0.95

Meets/Exceeds Specifications

SAE 5W40
API CK-4/SN
TBN 9
ACEA E9-12

Meets/Exceeds OEM Requirements

Caterpillar ECF-3
Cummings CES-20086
Deutz DQC III-10 LA
Mack EOS 4.5
Mercedes Benz 228.31
MTU Type 2.1
Renault Truck RL-2
Volvo VDS-45

Note: The general description, recommended uses, application data and statements in the product literature are guidelines. Because the product may be used for a variety of applications, over which **Carteroil USA Inc.** has no control, **Carteroil USA Inc.** assumes no liability for incidentals, consequential, or direct damage of any kind, regardless of causes, including negligence. For more information please visit us at www.carteroilusa.com

