



# DURALEC SUPER™

## CK-4 HIGH PERFORMANCE DIESEL MOTOR OIL

### BEYOND SYNTHETIC™

Duralect Super API CK-4 motor oil is a high performance synthetic engine oil made for those diesel engines requiring the use of an emissions compliant oil for the 2007 and 2010 emissions equipment such as: DPF's, Catalytic Converters, EGR, and SCR injection with the ultra low sulfur diesel fuels found in North America and Europe.

Duralect Super API CK-4 motor oil has proven to offer excellent performance to maximize component life, extend drain intervals and improve fuel performance. Made with high performance synthetic base stocks, Duralect Super CK-4 has excellent high temperature break down resistance and low temperature pumpability to minimize cold induced startup wear. The stable additive package has good soot dispersancy to protect against oil thickening and abrasive wear, provides rust and corrosion protection and helps prevent varnish and sludge formation.

### OEM RECOMMENDATIONS

Royal Purple Duralect Super API CK-4 should be considered where the following OEM specifications are recommended:

ACEA E9-16  
Caterpillar ECF-3  
Cummins CES 20086  
Detroit Diesel DFS 93K222  
Deutz DQC III-10 LA  
Mack EO-S -4.5  
MB 228.31  
Renault VI RLD-4  
Volvo VDS-4.5

Royal Purple Duralect Super API CK-4 can also be used in older diesel engines, including off highway engines still using the 500 ppm sulfur diesel fuels.

### PERFORMANCE ADVANTAGES

- **Greater Wear Protection**  
Duralect Super's advanced additive technologies form a tough, tenacious film on all metal surfaces providing superior engine wear protection.
- **Greatly Extends Oil Drain Intervals**  
Duralect Super Motor Oil is extremely oxidation stable and stands up to the heat that causes oils to thicken, form lacquer and varnish deposits, lose its lubricity and shorten the life of both the oil and the engine.
- **Superior Corrosion Protection**  
Duralect Super's advanced additive technologies protects during normal and severe operation and acts as preservative oil during shut-down, which provides protection upon initial startup.
- **Reduces Exhaust Emissions**  
Duralect Super Motor Oil provides a superior seal between the piston ring and cylinder wall, which reduces blow-by, improves combustion efficiency and reduces harmful emissions.
- **Keeps Engines Clean**  
Duralect Super Motor Oil's natural solvency cleans deposits left by old oils and keeps engines clean.
- **API Warranty Compliant**  
Duralect Super's SAE grade motor oils are API licensed. They are compatible with other mineral and synthetic motor oils. Switching is easy. Drain old oil. Change the filter. Add Duralect Super Motor Oil. Follow the manufacturer's recommended drain intervals during warranty.
- **Will Not Harm Seals**  
Duralect Super Motor Oil has the same excellent seal compatibility as mineral engine oils.
- **Environmentally Responsible**  
Duralect Super Motor Oil components are TSCA listed and meets EPA, RCRA and OSHA requirements. Duralect Super Motor Oil extends oil drain intervals, eliminates premature oil changes, decreases the amount of oil purchased and disposed of and conserves energy.



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TYPICAL PROPERTIES*	ASTM METHOD	SAE GRADE		
		10W-30 CK-4	5W-40** CK-4 / SN	15W-40 CK-4
Viscosity	D445			
cSt @ 40°C		70.4	86.3	108.0
cSt @ 100°C		11.9	14.4	15.2
Viscosity Index	D2270	150	174	146
Pumping Viscosities	D4684			
cP @ -35°C		---	21,300	---
cP @ -30°C		23,300	---	---
cP @ -25°C		---	---	14,900
Cranking Viscosity	D5293			
cP @ -30°C		---	6,570	---
cP @ -25°C		6,310	---	---
cP @ -20°C		---	---	4,628
Flash Point, °F	D92	327	421	454
Pour Point, °F	D6892	-49	-49	-49
Total Base Number, mgKOH/g	D2896	10.0	10.3	10.0
Sulfated Ash, % Max.	D874	1.0	1.0	.98

\*Properties are typical and may vary  
 10W-30 and 15W-40 meets API Service CK-4, CJ-4, CI-4 Plus, CI-4 warranty requirements for diesel engines. It also meets Cummins® CES 20086; DDC® DFS 93K222; Mack® EO-S-4.5; Volvo VDS-4.5; CAT ECF-3; Ford WSS-M2C171-F1; ACEA E9-16; Daimler MB 228.31; Renault® VI RLD-4; MTU Type 2.1; Deutz DQC III-10 LA; and JASO DH-2.

\*\* Duralec Super 5W-40 CK-4 / SN 5W-40 meets API Service Classification CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4 / SN, SM, SL, SJ. This product meets or exceeds requirements for Ford® Specification WSS-M2C171-F1, DDC® DFS 93K222, DDC® DFS 93K218, Mack® EOS-4.5, Mack® EO-O Premium Plus, Volvo® VDS-4.5, Volvo® VDS-4, VDS-3, Renault® VI RLD-4 and Renault® RLD-3, CAT ECF-3, ECF-2, Cummins® CES 20081 and CES 20086, Daimler MB228.31, EO-N, MAN M3575, MTU Category 2.1, and ACEA E9 and ACEA E7

Duralec Super API CK-4 motor oil meets or exceeds car manufacturer's oil specifications and will not void warranty. Follow the manufacturer's recommended drain intervals during warranty.

Note: Engine oil's solvency cleans wear metals and deposits left by previous oils. These wear metals and deposits can cause abnormally high values on used oil analysis until the engine is clean.