



## **Q<sup>®</sup> ADVANCED ENGINE FULL SYNTHETIC MOTOR OIL**

### **PRODUCT DESCRIPTION**

Today's advanced engines generate power and performance with the help of aluminum cylinder heads, aggressive cam designs, multi-valves and turbochargers. But with powerful, high-tech components and tighter tolerances comes added friction and heat, which can break down even the toughest of conventional motor oils.

New Q<sup>®</sup> ADVANCED ENGINE FULL SYNTHETIC MOTOR OIL is specially formulated to maximize the performance and power of today's modern engines. Under conditions in which friction and heat are most severe, the heat-activated molecules in Q are unleashed to provide a low-friction, ultra-heat resistant lubrication film. This superior, protective layer helps control power-robbing friction, prevent oil shearing and resist thermal and viscosity breakdown, whether under heavy loads or at high RPMs. The result: less friction, superior protection, and best of all... maximum power.

### **APPLICATION**

The unique properties of Q<sup>®</sup> ADVANCED ENGINE FULL SYNTHETIC MOTOR OIL are especially apparent in the following applications:

- European vehicles
- Technologically advanced engines
- Vehicles that are driven in very hot or cold weather

### **FEATURES**

Compared to conventional oils, Q<sup>®</sup> ADVANCED ENGINE FULL SYNTHETIC MOTOR OIL provides:

- Unsurpassed protection against engine friction, especially as temperatures increase
- Improved resistance to engine stress at high rpm's and under heavy loads
- Superior resistance to thermal breakdown
- Better protection against harmful deposits and acids
- Enhanced protection for turbocharged and supercharged engines
- Superior lubrication at extreme low temperatures

### **PERFORMANCE**

- Meets or exceeds API SM Service Classification
- Meets or exceeds the API CF diesel specification (SAE 5W-30, 10W-30 and 5W-50)
- Exceeds the requirements of ILSAC GF-4, GF-3 and GF-2 (SAE 5W-20, SAE 5W-30, SAE 10W-30)
- Exceeds the requirements for GM 6094 (SAE 5W-20, 5W-30, SAE 10W-30)
- Exceeds Ford WSS-M2C153-H and WSS M2C930-A specification (SAE 5W-20 only)
- Exceeds Ford WSS M2C929-A (SAE 5W-30)
- Exceeds the Chrysler MS 6395 specification (SAE 5W-20, 5W-30, 10W-30)
- Meets the European ACEA A1/B1-02 (5W-20), ACEA A5-02 (5W-30) specifications

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES  
Q<sup>®</sup> ADVANCED ENGINE FULL SYNTHETIC MOTOR OIL**

TEST	METHOD	TYPICAL RESULTS			
		5W-20	5W-30	10W-30	5W-50
Viscosity Grade.		5W-20	5W-30	10W-30	5W-50
API Service		SM	SM/CF	SM/CF	SM/CF
ILSAC		GF-4	GF-4	GF-4	
Gravity, °API	ASTM D-287	35.1	34.8	34.2	34.4
Specific Gravity @ 60°F(15.6°C)	ASTM D-287	0.849	0.851	0.854	0.853
Viscosity					
@ 40°C, cSt	ASTM D-445	46.51	58.5	61.3	109.5
@ 100°C, cSt	ASTM D-445	8.68	10.53	10.4	18.7
Viscosity Index	ASTM D-2270	168	172	159	192
Flash Point, °C	ASTM D-93	440	440	440	440
Pour Point, °C	ASTM D-97	-45	-45	-45	-42
CCS Viscosity, cP (°C)	ASTM D-5293	3,480 (-30)	3,980 (-30)	3,490 (-25)	4,600 (-30)
MRV Viscosity, cP (°C)	ASTM D-4684	9,600 (-35)	12,800 (-35)	8,800 (-30)	23,300 (-35)
HT/HS Viscosity, cP (°C)	ASTM D-4683	2.64	3.0	3.2	4.1
Noack Volatility, %	ASTM D-5800	13.4	12.3	9.2	14.2