



ENGINE OILS

PRODUCT DESCRIPTION

FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils are formulated to help improve fuel economy and provide complete engine protection. FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils are premium multi-grade motor oils formulated to provide excellent all weather engine protection.

FormulaShell® SAE 5W-20, SAE 5W-30 and SAE 10W-30 Engine Oils meet or exceed all automobile and light duty truck warranty requirements for gasoline and turbocharged engines where an ILSAC GF-4, API SM, SAE 5W-20, SAE 5W-30, or SAE 10W-30 engine oil is recommended. FormulaShell® Engine Oils contain select viscosity index improvers to provide easier cold weather starting and better high temperature protection demanded by modern high out-put engines. The SAE 5W-20, SAE 5W-30 and SAE 10W-30 grades are Energy Conserving and meet ILSAC GF-4 specifications and API SM and prior API categories. Follow manufacturer's recommendations for viscosity grade and API Service Category. These oils are suitable for use and meet or exceed the performance requirements of many automobile manufacturers for service fill oil: 5W-20 (GM 6094M, Chrysler MS 6395P), 5W-30 (GM 6094M, Chrysler MS 6395P), and 10W-30 (GM 6094M, Chrysler MS 6395P).

FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils are premium high performance multigrade motor oils formulated to provide wide temperature range engine protection. FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils meet or exceed all automobile and light duty truck warranty requirements for gasoline engines where a SAE 10W-40 or SAE 20W-50 engine oil is recommended. These grade oils meet API Classification SM and can be used in place of SL, SJ, and prior API category oils. Follow manufacturer's recommendations for viscosity grade and API Service Category.

FormulaShell® SAE 10W-40 and SAE 20W-50 Engine Oils are formulated with, thermally stable base stocks and select additive systems to provide protection for the demands made on modern crankcase lubricants. These oils provide a high level of protection against wear, rust and corrosion, piston scuffing and, high temperature oxidation and valve train wear.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

FormulaShell® ENGINE OILS

TEST	TYPICAL RESULTS				
	5W-20	5W-30	10W-30	10W-40	20W-50
SAE Viscosity Grade	5W-20	5W-30	10W-30	10W-40	20W-50
API Gravity	32.84	32.60	31.37	31.30	29.40
Viscosity, cSt, 40°C	46.28	66.16	69.04	96.95	158.32
Viscosity, cSt, 100°C	8.16	10.75	10.5	14.0	17.63
Vis. @ 100 °F., SUS	235	337	354	510	864
Vis. @ 210°F., SUS	54	63	62	76	93
Viscosity Index	151	153	138	147	122
Flash Point, °C (°F)	215 (420)	215 (420)	221 (430)	221 (430)	238 (460)
Pour Point, °C (°F)	-33 (-27)	-30 (-22)	-30 (-22)	-27 (-17)	-24 (-11)
Viscosity, cP, Max., 6600 @	-30°C (-22°F)	-30°C (-22°F)			
cP, Max 7000 @			-25°C (-13°F)	-25°C (-13°F)	
cP, Max., 9500 @					-15°C (5°F)
Low Temp. Pumping	-35°C (-31°F)	-35°C (-31°F)	-30°C (-22°F)	-30°C (-22°F)	-20°C (-4°F)
Viscosity, cP Max	40,000	40,000	50,000	60,000	60,000

