



ENGINE OILS

Meets API Service Categories SM, SL, SJ, Energy Conserving and ILSAC GF-4 and GF-3 specifications.

PRODUCT DESCRIPTION

FormulaShell® SAE 5W-20 Engine Oils meet the new viscosity requirements of Ford and Honda vehicles. It is formulated to improve fuel economy and provide complete engine protection. FormulaShell® SAE 5W-30 and SAE 10W-30 Engine Oil is a premium multigrade motor oil formulated to provide excellent all weather engine protection.

FormulaShell® Engine Oils exceed all automobile and light duty truck warranty requirements for gasoline and turbocharged engines where a SAE 5W-20, SAE 5W-30, or SAE 10W-30 engine oil is recommended. FormulaShell® ENGINE OILS contain shear stable, 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 and GF-3 specifications and API SM. Follow manufacturer's recommendations for viscosity grade and API Service Category.

FormulaShell® SAE 10W-40 and SAE 20W-50 Motor Oil is a premium high performance multigrade motor oil formulated to provide wide temperature range engine protection. FormulaShell® SAE 10W-40 and SAE 20W-50 Motor Oil exceeds all automobile and light duty truck warranty requirements for gasoline and turbocharged engines where a SAE 10W-40 and SAE 20W-50 engine oil is recommended. These grade oil meets API Classification SM and can be used in place of SL, SJ, SH, and SG rated oils. Follow manufacturer's recommendations for viscosity grade and API Service Category.

FormulaShell® ENGINE OILS are formulated with high viscosity index, 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 combustion chamber deposits, high temperature oxidation and valve train wear.

PRECAUTIONS

The petroleum hydrocarbons used in this product have been severely hydrotreated and/or solvent refined and are considered non-hazardous under current OSHA regulations. Good hygiene, which includes regular washing of skin with soap and water and frequent changing of soiled clothing, should be used to avoid possible irritation and/or dermatitis. The formation of oil mists should be avoided. Note that used motor oil, that is oil which has been exposed to the very high temperatures of internal combustion engines, tends to contain higher amounts of aromatics, which have been linked to skin cancer in certain laboratory studies.

WARNING

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to the heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
FormulaShell® ENGINE OILS

TEST	TYPICAL RESULTS				
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	99.40	165.93
Viscosity, cSt, 100°C	8.16	10.75	10.5	14.21	18.11
Vis. @ 100 °F., SUS	235	337	354	510	864
Vis. @ 210°F., SUS	54	63	62	76	93
Viscosity Index	151	153	138	146	121
Flash Point, °C (°F)	215 (420)	215 (420)	221 (430)	221 (430)	238 (460)
Pour Point, °C (°F)	-36 (-33)	-36 (-33)	-27 (-17)	-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