

Product Data Sheet

ECOSE® SYNTHETIC MOTOR OIL

Meets OEM Demands for Improved Performance

Uniquely formulated with an advanced additive system proven to provide protection against low-speed pre-ignition **(LSPI)**¹ often occurring in high performance turbocharged gasoline direct-inject engines **(TGDI)**. They are full synthetic, multi-grade automotive lubricants formulated to meet or exceed the warranty requirements of most major manufacturers of gasoline engines. Extending oil change intervals and overall engine maintenance is improved due to the full-synthetic formulations these fluids offer.

Features and Benefits

- Optimize fuel economy
- Promotes exceptional cleaning power
- · Helps control oxidation and lower emissions
- Excellent low temperature starting and pumpability performance

Applications

- Gasoline-electric hybrids
- Flex-fuel passenger cars, light duty trucks and sport utility vehicles
- Gasoline engines which have been converted to operate on compressed natural gas (CNG), liquefied natural gas (LNG), and liquefied petroleum gas (LPG, which includes propane and butane)
- Synthetic 0W-16 is classified by American Petroleum Institute (API) to meet or exceed API SP/ILSAC GF-6B
- Outstanding protection in vehicles such as Toyota and Honda where a SAE 0W-16 is specified

Approvals / Recommended for use by Nu-Tier Brands:

	0W-16	0W-20	0W-30	0W-40	5W-20	5W-30	10W-30
API SP, SN Plus, SN	Х	Х	Х	Х	Х	Х	Х
ILSAC GF-6A / Resource	-	Х	Х	-	Х	Х	Х
Conserving							
ILSAC GF-6B / Resource	X	-	-	-	-	-	-
Conserving							
Ford WSS-M2C960-A1	-	-	-	-	Х	-	-
Ford WSS-M2C961-A1	-	-	Х	-	-	Х	-
Ford WSS-M2C962-A1	-	Х	-	-	-	-	-
Chrysler MS-6395	-	Х	Х	-	Х	Х	Х
GM 4718M**	-	-	Х	Х	-	Х	Х
GM 6094**	-	-	Х	Х	Х	Х	Х
Toyota/Honda	Х	Х	Х	-	Х	Х	Х

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**Obsolet X² - ILSAC GF-6B will be defined for 0W-16 viscosity grade oil only







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TYPICAL PROPERTIES:

SAE Grade	Test Method	0W-16	0W-20	0W-30	0W-40	5W-20	5W-30	10W-30
Product Code		530208	530212	530215	530218	530210	530211	530213
Kinematic Viscosity, cSt at 40°C	ASTM D-445	36.5	46.0	60.5	73.6	45.8	61.5	65.5
Kinematic Viscosity, cSt at 100°C	ASTM D-445	7.2	8.6	10.8	13.2	8.5	11.0	10.4
Viscosity Index, calculated		162	168	175	181	165	175	147
Cold Cranking @ temp °C, cP	ASTM D-5293	5000 at -35	5000 at -35	5500 at -35	5700 at -35	5200 at -30	5000 at -30	4800 at -25
Total Base Number, mg KOH/g	ASTM D-2896	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Pour Point, °C	ASTM D-97	-48	-42	-45	-45	-40	-40	-36
HTHS Viscosity	ASTM D-4683	2.6	2.6	3.4	3.6	2.8	3.1	3.2
Sulfated Ash, wt %	ASTM D-874	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Phosphorus, wt %	ASTM D-4981	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Highest API / ILSAC Performance		SP / GF-6B	SP / GF-6A	SP/GF-6A	API SP	SP / GF-6A	SP/GF-6A	SP/GF-6A

*Note: Values shown are typical only and do not constitute a specification. Minor variations in product are to be expected in normal manufacturing. Always confirm with the original manufacturer's recommendation for proper equipment operating requirements.

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LSPI is a premature ignition of the air-fuel mixture in the combustion chamber. This low-speed pre-ignition is very violent and causes over pressurization of the combustion chamber that can lead to damage and failure of the piston, rings, valves, and other internal components.

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