PRODUCT INFORMATION

ECOSE® SYNTHETIC MOTOR OIL

MEETS OEM DEMANDS FOR IMPROVED PERFORMANCE TO COMBAT LOW SPEED PRE-IGNIGTION (LSPI)

ECOSE® Synthetic Motor Oil is 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. They offer excellent low temperature performance for rapid engine protection during start-up.

ECOSE® Synthetic Motor Oil can help optimize fuel economy, control oxidation and help lower emissions as compared to conventional motor oil. They are suitable for use in four-stroke gasoline engines used in passenger cars, light trucks, SUV's, motorcycles, generators and other equipment. All viscosity grades meet the performance requirements of the latest gasoline-fueled engine service **ILSAC GF-6A/Resource Conserving** (excludes **SAE 0W-40 & 0W-16** viscosity grade) and **API SP.**

ECOSE® Synthetic 0W-30 and 0W-40 viscosity grades provide exceptional cleaning power, wear protection and overall performance. They are recommended for many types of modern vehicles where they will help provide optimum performance especially when operating under severe driving conditions.

ECOSE® Synthetic 0W-16 is ultra-low viscosity engine oil designed to help provide long engine life and outstanding protection in vehicles such as Toyota and Honda where a SAE 0W-16 is specified. **ECOSE® Synthetic 0W-16** is classified by American Petroleum Institute (API) to meet or exceed **API SP/ILSAC GF-6B.**

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	X	X	X	X	X	X	X
ILSAC GF-6A / Resource Conserving	-	X	X	-	X	X	X
ILSAC GF-6B / Resource Conserving	X	-	-	-	-	-	-
Ford WSS-M2C945-A	-	-	-	-	X	-	-
Ford WSS-M2C946-A	-	-	X	-	-	X	-
Ford WSS-M2C947-A	-	X	-	-	-	-	-
Chrysler MS-6395	-	X	X	-	X	X	X
GM 4718M**	-	-	X	X	-	X	X
GM 6094**	-	-	X	X	X	X	X
Toyota/Honda	X	X	X	-	X	X	X

****Obsolete**

X[2] - ILSAC GF-6B will be defined for 0W-16 viscosity grade oil only.

Always consult your owner's manual for proper lubricant selection.

AVAILABILITY:

ECOSE® Synthetic Motor Oil is available throughout Nu-Tier Brands' marketing area. Your Nu-Tier representative can provide specific information. Need additional information? Call Nu-Tier Brands @ 1-877-771-5823 or visit Nu-tierbrands.com

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TYPICAL PROPERTIES:

SAE Grade		**0W-16**	**0W-20**	**0W-30**	**0W-40**	**5W-20**	**5W-30**	**10W-30**
Product Code	**Test Method**	**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.

X^2 - ILSAC GF-6B will be defined for 0W-16 viscosity grade oil only.

[1] 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.