DATA BULLETIN

Signature Series 100% Synthetic Motor Oil

The Top Tier of AMSOIL Synthetic Motor Oil

AMSOIL Signature Series Synthetic Motor Oil delivers extraordinary lubrication in all types of automotive gasoline engines. By combining industry-premier synthetic technology with AMSOIL premium additives, Signature Series Synthetic Motor Oil exceeds the higher performance demands of modern engines. It withstands the stress of higher horsepower, higher heat and complicated emissions control systems. Signature Series Synthetic Motor Oil is engineered to outperform competitive conventional and synthetic motor oils. It delivers long-lasting performance and protection.

AMSOIL, the leader in automotive synthetic lubrication, produced the world's first API-qualified synthetic motor oil in 1972. Trust the extensive experience of AMSOIL, the First in Synthetics®, to do the best job protecting your engine.

Extends Drain Intervals

AMSOIL Signature Series Synthetic Motor Oil can extend drain intervals far beyond those recommended for conventional oils. Its unique synthetic formulation and long-drain additive system are inherently stable to resist oxidation and neutralize acids over longer periods. Signature Series Synthetic Motor Oil is designed to deliver outstanding engine protection, cleanliness and performance over extended drain intervals. It reduces vehicle maintenance and waste oil disposal costs.

Maximizes Fuel Economy

AMSOIL Signature Series Synthetic Motor Oil is designed to maximize energy efficiency for optimum fuel economy. Unlike conventional oils, its uniform molecular structure helps it flow more freely and reduce friction between metal surfaces. Anti-friction additives are included to further improve energy efficiency.

Reduces Engine Wear

Signature Series Synthetic Motor Oil provides outstanding anti-wear protection. It has excellent viscosity film strength to separate metal surfaces and robust anti-wear additives to further reduce wear in metal-to-metal contact regions for improved engine life.

Reduces Oil Consumption and Emissions

Volatility (burn-off) occurs when oil gets hot, causing high oil consumption and emissions. AMSOIL Signature Series Synthetic Motor Oil exhibits an extremely low volatility rate; it controls volatility-related oil consumption and emissions.

Excels in Extreme Temperatures

AMSOIL Signature Series Synthetic Motor Oil resists thermal (heat) breakdown better than conventional oils. It is heavily fortified with detergent and dispersant additives to help prevent sludge deposits and keep engines clean. And unlike conventional oils, Signature Series Synthetic Motor Oil contains no wax, staying fluid in very cold winter temperatures for easier starting, improved oil flow and reduced bearing wear.

TYPICAL TECHNICAL PROPERTIES
AMSOIL Signature Series Synthetic Motor Oil

	0W-20 (ASM)	**5W-20** (ALM)	**0W-30** (AZO)	**5W-30** (ASL)	**10W-30** (ATM)
Kinematic Viscosity @ 100ºC, cSt (ASTM D 445)	8.8	8.7	10.4	10.5	10.5
Kinematic Viscosity @ 40ºC, cSt (ASTM D 445)	46.7	50.2	58.3	60.1	62.5
Viscosity Index (ASTM D 2270)	170	153	170	166	158
CCS Viscosity, cP @ (ºC) (ASTM D 5293)	4979 (-35)	4210 (-30)	5909 (-35)	4426 (-30)	3646 (-25)
Flash Point ºC (ºF) (ASTM D 92)	232 (450)	232 (450)	228 (442)	226 (439)	232 (450)
Fire Point ºC (ºF) (ASTM D 92)	252 (486)	248 (478)	254 (489)	248 (478)	248 (478)
Pour Point ºC (ºF) (ASTM D 97)	-53 (-63)	-53 (-63)	-51 (-60)	-51 (-60)	-48 (-54)
NOACK Volatility, % weight loss (g/100g) (ASTM D 5800)	9.3	5.5	7.6	6.9	5.3
High-Temperature/High-Shear Viscosity @ 150ºC, 1.0 X 10^6 $s.^{-1}$, cP (ASTM D 5481)	2.8	2.8	3.1	3.2	3.2
Four-Ball Wear Test @ 40 kgf, 75ºC, 1200 rpm, 1 hr, scar diameter, mm (ASTM D 4172)	0.35	0.35	0.35	0.35	0.35
Total Base Number (ASTM D 2896)	12.6	12.6	12.6	12.6	12.6

APPLICATIONS

AMSOIL Signature Series Synthetic Motor Oil is excellent for use in all types of gasoline-fueled vehicles. It is recommended for all domestic and foreign vehicles requiring any of the listed performance specifications:

0W-20 (ASM): API SN (Resource Conserving), SM…; ILSAC GF-5, GF-4…; ACEA A1/B1; GM 6094M; Chrysler MS-6395

5W-20 (ALM): API SN (Resource Conserving), SM…; ILSAC GF-5, GF-4…; ACEA A1/B1; Ford WSS-M2C945-A, WSS-M2C930-A; Chrysler MS-6395

0W-30 (AZO): API SN (Resource Conserving), SM…; ILSAC GF-5, GF-4…; ACEA A5/B5, A1/B1; Chrysler MS-6395; Suitable as a replacement for GM dexos1™ (supersedes LL-A-025, 6094M and 4718M)

5W-30 (ASL): API SN (Resource Conserving), SM…; ILSAC GF-5, GF-4…; ACEA A5/B5, A1/B1; Ford WSS-M2C946-A, WSS-M2C929-A; Chrysler MS-6395; GM dexos1™ (supersedes LL-A-025, 6094M and 4718M) *Fortified with detergents that exceed dexos1™ sulfated ash specifications.*

10W-30 (ATM): API SN (Resource Conserving), SM…; ILSAC GF-5, GF-4…; ACEA A5/B5, A1/B1; GM LL-A-025, 6094M, 4718M; Ford WSS-M2C205-A; Chrysler MS-6395

COMPATIBILITY

AMSOIL Signature Series Synthetic Motor Oil is compatible with other conventional and synthetic motor oils. Mixing AMSOIL motor oils with other oils, however, will shorten the oil's life expectancy and reduce the performance benefits. AMSOIL does not support extended drain intervals where oils have been mixed.

Aftermarket oil additives are **not recommended** for use with AMSOIL synthetic motor oils.

SERVICE LIFE

AMSOIL Signature Series Synthetic Motor Oil is recommended for extended drain intervals in unmodified(1), mechanically sound(2) gasoline-fueled vehicles as follows:

- **Normal Service**(3) – Up to 25,000 miles or one year, whichever comes first.
- **Severe Service**(4) – Up to 15,000 miles or one year, whichever comes first.
- In all non-gasoline-fueled vehicle applications, extend the oil change interval according to oil analysis or follow the OEM* drain interval.

**OEM – Original Equipment Manufacturer*

(1) Engines operating under modified conditions (non-stock) are excluded from extended drain recommendations. Examples include the use of performance computer chips; non-OEM approved exhaust, fuel or air induction systems; and the use of fuels other than those recommended for normal operation by the manufacturer.

(2) Mechanically sound engines are in good working condition and do not, for example, leak or consume excessive amounts of oil, are not worn out, do not overheat, do not leak antifreeze and have properly working emissions control systems. AMSOIL recommends repairing malfunctioning engines prior to the installation of AMSOIL synthetic oils.

(3) Personal vehicles frequently traveling greater than 10 miles (16 km) at a time and not operating under severe service.

(4) Turbo/supercharged engines, commercial or fleet vehicles, excessive idling, vehicles with more than 100,000 miles without prior continuous use of AMSOIL motor oil, daily short-trip driving less than 10 miles (16 km), frequent towing, plowing, hauling or dusty condition driving.

AMSOIL Ea® Full-Flow Oil Filters are designed for extended change intervals. They stop smaller particles, flow more oil and last longer than regular filters. For best performance, use AMSOIL Ea Full-Flow Oil Filters.

AMSOIL PRODUCT WARRANTY

AMSOIL products are backed by a Limited Liability Warranty. For complete information visit www.amsoil.com/warranty.aspx.

HEALTH & SAFETY

This product is not expected to cause health concerns when used for the intended application and according to the recommendations in the Safety Data Sheet (SDS). An SDS is available via the Internet at www.amsoil.com or upon request at (715) 392-7101. **Keep Out of Reach of Children.** Don't pollute. Return used oil to collection centers.

The First in Synthetics®

AMSOIL products and Dealership information are available from your local AMSOIL Dealer.

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