



CITGO® SUPERGARD® Full Synthetic Motor Oils

OVERVIEW

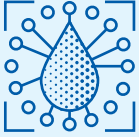


- Well-balanced combinations of today's highest quality synthetic base stocks and an advanced additive system that meets stringent automotive specifications, for demonstrated improved performance in today's advanced engine designs.
- Designed to provide excellent protection in today's high-performance gasoline engines (including turbocharged and supercharged) in passenger cars, vans, sport utility vehicles, and light trucks.
- Available in SAE 0W-16, 0W-20, 5W-20, 5W-30, and 10W-30 viscosity grades.

FEATURES & BENEFITS



- Excellent low-temperature starting and pumpability characteristics.
- High-temperature/high-shear properties well above those of conventional oils.
- Lower volatility as compared to conventional oils.
- Excellent thermal and oxidation stability.
- Enhanced protection against varnish buildup and sludge formation in critical engine parts, for top performance and long engine life.
- Extended engine life due to control of wear and deposit formation.
- Compatible with conventional and synthetic motor oils.
- Protects today's high power density engines from Low Speed Pre-Ignition (LSPI) and timing chain wear.

APPLICATIONS

- Recommended for passenger cars, sport utility vehicles, and light trucks operating on gasoline.
- Recommended for use in 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).
- Service categories:
All viscosity grades meet the performance requirements for API SP and display the API Certification Mark and API Service Symbol. All viscosity grades meet the latest gasoline-fueled engine service GF-6A or GF-6B, and are resource conserving. They are recommended for use in Ford, Chrysler, Toyota, Honda, GM and other passenger car gasoline engines. (Use only recommended viscosity grades.) They have also demonstrated benefits in industry-accepted fuel economy tests.

SAE 0W-16: An ultra-low viscosity engine oil recommended for original equipment manufacturers (OEM) such as Toyota and Honda, where an API SP/ILSAC GF-6B SAE 0W-16 is specified.

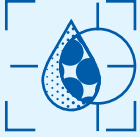
SAE 0W-20: Recommended for original equipment manufacturers (OEM) such as Toyota and Honda, where a SAE 0W-20 is specified. Approved GM dexos1® Gen2 under material code 620860001. Provides excellent performance where Ford WSS-M2C962-A1 is referenced.

SAE 5W-20: Approved GM dexos1 Gen2 under material code 620859001. Provides excellent performance where WSS-M2C960-A1 is referenced.
SAE 5W-30: Approved GM dexos1 Gen2 under material code 620861001. Provides excellent performance where Ford M2C961-A1 is referenced.

SAE 10W-30: Provides excellent performance where SAE 10W-30 engine oil is specified.
- Refer to equipment owner's manual for proper lubricant recommendation.

NOTE: CITGO SUPERGARD Full Synthetic Motor Oils are not recommended for use in diesel engines. CITGO CITGARD® Motor Oils are recommended for these applications.

PROPERTIES



Typical Properties for CITGO SUPERGARD Full Synthetic Motor Oils:

SAE Grade	0W-16	0W-20	0W-20	0W-20 (dexos1® Gen2)	5W-20	5W-20 (dexos1® Gen2)	5W-30	5W-30 (dexos1® Gen2)	10W-30
Material Code	620858001	620864001	620865001	620866001	620866001	620859001	620867110	620861001	620863001
Gravity, ASTM D4052, °API	36.6	36.5	35.0	36.2	34.5	35.2	34.2	35.7	34.4
Pounds Per Gallon	7.01	7.02	7.08	7.03	7.1	7.07	7.11	7.05	7.27
Flash Point, ASTM D92, °F (°C)	442 (228)	221 (430)	428 (220)	435 (220)	442 (228)	450 (232)	450 (232)	450 (232)	450 (232)
Low Temperature Cranking, ASTM D5293									
Temperature, °F (°C)	-31 (-35)	-31 (-35)	-31 (-35)	-31 (-35)	-22 (-30)	-22 (-30)	-22 (-30)	-22 (-30)	-13 (-25)
Viscosity, cP	4,329	4,926	5,190	4,685	5,300	3,512	4,080	3,726	3,685
Viscosity ASTM D445									
cSt at 40°C	36.5	44.9	46.0	46.1	52	48.08	58.5	55.69	62.2
cSt at 100°C	7.3	8.7	8.5	8.8	8.7	8.9	10.5	10	10.4
Viscosity Index, ASTM D2270	168	176	164	174	145	167	171	168	155
Pour Point, ASTM D97, °F (°C)	-49 (-45)	-49 (-45)	-33 (-36)	-49 (-45)	-33 (-36)	-44 (-42)	-27 (-33)	-44 (-42)	-44 (-42)
Color, ASTM D1500	L3.5	L3.5	L3.5	L4.0	L3.5	L4.0	L3.5	L4.0	L3.0
ILSAC	GF-6B	GF-6A	GF-6A	GF-6A	GF-6A	GF-6A	GF-6A	GF-6A	GF-6A
API SP/Resource Conserving	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Licensed GM dexos1® Gen2	N/A	—	—	Yes	—	Yes	—	Yes	N/A
Ford WSS-	N/A	M2C962-A1	M2C962-A1	M2C962-A1	M2C960-A1	M2C960-A1	M2C961-A1	M2C961-A1	N/A
Chrysler MS 6395	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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