

TECH DATA SUPREME™ HP, SHP AND UHP MOTOR OILS

INTRODUCTION

Petro-Canada Lubricants' SUPREME™ line of High Performance, Super High Performance and Ultra High Performance motor oils are designed to lubricate the engines of today's gasoline and ethanol (up to E85) fuelled passenger cars, vans, CUVs, SUVs and light duty trucks. With today's high-powered engines, SUPREME motor oils can help provide long engine life by lubricating critical parts effectively. They are formulated to meet and exceed ILSAC GF-7 as applicable and API SQ specifications and also provide enhanced protection for the latest emission control systems and turbochargers.

SUPREME motor oils are blended with high quality, ultra-pure base oils. In combination with leading-edge additive technology, they deliver exceptional resistance to thermal breakdown, outstanding low temperature fluidity, and excellent engine protection against wear and deposit formation under the most severe driving conditions.

SUPREME motor oils are specially formulated to exceed the latest API Service Classification for gasoline engines, API SQ. SAE grades 0W-20, 0W-30, 5W-20, 5W-30, and 10W-30 also meet the latest ILSAC GF-7A specification while SAE 0W-16 meets the latest ILSAC GF-7B specification. SUPREME UHP 0W-20 and 5W-30 are also designed to exceed GM's dexos®1 Gen 3 global gasoline engine oil specification. Our oils feature advanced formulations to protect gasoline direct injected and turbocharged direct injected engines from accelerated timing-chain wear and harmful damage caused by abnormal combustion events that can sound like engine "knocking".

FEATURES AND BENEFITS

Extended Engine Life

- Outstanding protection against wear, rust and corrosion
- Excellent valvetrain and timing-chain wear protection
- · Bearing life greatly extended
- Minimizes corrosion due to stop-start driving in cold weather
- Protects against low speed pre-ignition (LSPI) throughout the drain interval

Exceptional Resistance to High Temperature Thermal Breakdown

- Cleaner running engines
- Reduces formation of varnish, sludge and carbon deposits on engine parts
- Protects turbochargers from deposit formation
- Minimizes piston-ring sticking
- Maintains effective lubrication due to oil passages staying clean

Outstanding Low Temperature Fluidity

- · Permits easier unaided cold weather starts
- Reduces wear during low temperature start-up and operation

Reduced Oil Consumption

- Low evaporation loss results in less oil top-up
- · Verified seal compatibility to prevent leaks

Compatible with High Ethanol Fuels (up to E85)

- Protects against engine corrosion
- Prevents water separation

Protection of Exhaust Emission Control Systems

 Formulated to meet reduced phosphorus and sulphur levels, and to provide reduced phosphorus volatility in order to protect and extend the life of emission control systems

The dexos® specification and trademark are exclusive to General Motors, LLC.

Petro-Canada Lubricants specialty fluids, lubricants and greases have an advantage in quality and performance.

That's because our formulas are created and reviewed by an expert team of Research & Development specialists who ensure our finished products deliver to the specifications we demand and the performance standards our customers need.

PRODUCT LINE

SUPREME passenger car motor oils are formulated to exceed API SQ as well as ILSAC GF-7, where applicable. For a full list of licenses, approvals and recommendations, please see the chart on the following page.

SUPREME HP

SUPREME HP - High Performance synthetic blend motor oils that deliver excellent engine protection. They are designed to protect against thermal breakdown, oxidation and wear to keep engines running cleaner for longer. Product available in SAE 5W-20, 5W-30, 10W-30, 10W-40 and 20W-50 viscosity grades.

SUPREME SHP

SUPREME SHP - Super High Performance synthetic motor oils that delivers exceptional performance and engine protection even in the toughest driving conditions. SAE XW-20 and XW-30 viscosity grades also help optimize fuel economy and lower emissions. Product available in SAE 0W-20, 0W-30, 5W-20, 5W-30, and 5W-40 viscosity grades.

SUPREME UHP

SUPREME UHP - Ultra High Performance synthetic motor oils formulated to provide exceptional protection against engine wear and exceptional stay-in-grade oil strength and lasting protection between changes. They also provide outstanding cold weather performance, faster start-ups and better protection throughout the drain interval. Product available in SAE 0W-16, 0W-20 and 5W-30 viscosity grades.

IMPROVED FUEL ECONOMY PERFORMANCE

SUPREME motor oils meet or exceed the ILSAC GF-7 requirements for fuel economy improvement and fuel economy retention, which surpass the previous generation of ILSAC GF-6 motor oils, as applicable. They not only provide better initial fuel economy, but they are better at maintaining it over the oil drain interval.

APPLICATIONS

SUPREME motor oils are recommended for year-round use in gasoline, gasoline containing ethanol (up to E85), propane and compressed natural gas (CNG) fuelled engines. SUPREME motor oils meet or exceed new car warranty requirements for North American and Asian vehicles where ILSAC GF-7A or ILSAC GF-7B as applicable and API SQ engine oils are recommended. They are fully backserviceable to previous ILSAC and API performance ratings including ILSAC GF-6 and API SP, SN, SN PLUS and previous.

SUPREME motor oils are compatible with all other synthetic and conventional motor oils.

Always consult owner's manual to select the appropriate viscosity grade and approval level.

		SUF	SUPREME HP				าร	SUPREME SHP				SUPREME UHP	
Products	5W-20	5W-30	10W-30	10W-40	20W-50	0W-20	0W-30	5W-20	5W-30	5W-40	0W-16	0W-20	5W-30
energy	SQ Resource Conserving	SQ Resource Conserving	SQ Resource Conserving	ÖS	S S	SQ Resource Conserving	SQ Resource Conserving	SQ Resource Conserving	SQ Resource Conserving	SS \$	SQ Resource Conserving	SQ Resource Conserving	SQ Resource Conserving
AMERICAN PETROLEUM INSTITUTE	SP Resource Conserving*	SP Resource Conserving*	SP Resource Conserving*	*AS	*ds	SP Resource Conserving*	SP Resource Conserving*	SP Resource Conserving*	SP Resource Conserving*	×as	SP Resource Conserving*	SP Resource Conserving*	SP Resource Conserving*
ILSAC	★ GF-7A ✓ GF-6A*	★ GF-7A ✓ GF-6A*	★ GF-7A ✓ GF-6A*			★ GF-7A GF-6A*	★ GF-7A GF-6A*	★ GF-7A ✓ GF-6A*	★ GF-7A ✓ GF-6A*		★ GF-7B ✓ GF-6B*	★ GF-7A ✓ GF-6A*	★ GF-7A ✓ GF-6A*
CHRYSLER	MS-6395	MS-6395	MS-6395			MS-6395		MS-6395	• MS-6395			• MS-6395	• MS-6395
Gord	WSS- M2C970-A1	WSS- M2C971-A1				WSS- M2C972-A1	WSS- M2C973-A1	WSS- M2C970-A1	WSS- M2C971-A1			WSS- M2C972-A1	WSS- M2C971-A1
E												dexos1® Gen 3 D330- BBDE024	dexos1® Gen 3 D330- AACK024
ASIAN OEMS			Σ	leets specific where ILS	ations for As	Meets specifications for Asian OEMs (including, but not limited to, Honda, Hyundai, Kia, Mazda, Nissan, Toyota) where ILSAC GF-x and/or API Sx is listed as the recommended lubricant in the OEM owner's manual.	ing, but not limite ed as the recomn	d to, Honda, Hyu nended lubricant	ndai, Kia, Mazda, in the OEM owne	Nissan, Toy r's manual.	yota)		

* back-serviceable dexos®1 Gen 2, dexos®1 (First Generation), GM6094M and GM4718M The dexos® specification and trademark are exclusive to General Motors, LLC.

SUPREME HP, SHP and UHP products meet specifications for OEMs where ILSAC GF-x and/or API Sx is listed as the recommended lubricant in the OEM owner's manual. Always consult the owner's manual to select the appropriate viscosity grade and approval level for your engine.

TYPICAL PERFORMANCE DATA

	ASTM			SUPREME HP		
Property	Test Method	5W-20	5W-30	10W-30	10W-40	20W-50
Density, kg/L @ 15°C/59°F	D4052	0.856	0.856	0.863	0.863	0.874
Colour	D1500	<3.0	<2.5	<3.0	<3.0	<3.0
Flash Point, COC, °C/°F	D92	228/442	224/435	232/450	227/440	204/399*
Pour Point, °C/°F	D5950	-45/-49	-45/-49	-42/-44	-45/-49	-27/-17**
Kinematic Viscosity, cSt @ 40°C cSt @ 100°C	D445	48.8 8.4	59.6 10.0	65.9 10.2	97.5 14.3	159 18.0
Viscosity Index	D2270	147	155	140	151	126
Cold Cranking Viscosity, cP @ °C/°F	D5293	5,500 @ -30/-22	5,900 @ -30/-22	5,300 @ -25/-13	5,900 @ -25/-13	7,150 @ -15/ 5
Borderline Pumping Viscosity, cP @ °C/°F	D4684	15,000 @ -35/-31	18,750 @ -35/-31	15,100 @ -30/-22	24,000 @ -30/-22	14,000 @ -20/-4
Volatility (Noack), % loss	D5800	12.1	12.1	10.5	10.5	3.6
Sulphated Ash, % wt	D874	0.70	0.70	0.70	0.70	0.70
Sulphur, % wt	D4294	0.25	0.25	0.25	0.25	0.25***
Phosphorous, % wt	D4951	0.075	0.075	0.075	0.075	0.075
Base Number (BN), mg KOH/g	D2896	7.8	7.9	7.5	7.5	7.4
High-Temperature High-Shear (HTHS) Viscosity, cP @ 150°C	D4683	2.6	2.9	3.0	3.8	4.8

	ASTM						SUPREME UHP			
Property	Test Method	0W-20	0W-30	5W-20	5W-30	5W-40	0W-16	0W-20	5W-30	
Density, kg/L @ 15°C/59°F	D4052	0.846	0.845	0.850	0.853	0.850	0.844	0.845	0.845	
Colour	D1500	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Flash Point, COC, °C/°F	D92	203/397*	203/397*	203/397*	203/397*	203/397*	220/428	225/437	233/451	
Pour Point, °C/°F	D5950	-45/-49	-45/-49**	-45/-49**	-45/-49**	-36/-33	-48/-54	-45/-49	-39/-39	
Kinematic Viscosity, cSt @ 40°C cSt @ 100°C	D445	46.0 8.6	58.5 10.7	48.4 8.4	61.3 10.3	88.9 14.5	37.9 7.4	43.4 8.2	60.5 10.9	
Viscosity Index	D2270	168	177	149	157	170	166	166	173	
Cold Cranking Viscosity, cP @ °C/°F	D5293	5,600 @ -35/-31	5,500 @ -35/-31	5,200 @ -30/-22	5,600 @ -30/-22	5,400 @ -30/-22	4,500 @ -35/-31	5,500 @ -35/-31	3,600 @ -30/-22	
Borderline Pumping Viscosity, cP @ °C/°F	D4684	17,600 @ -40/-40	24,000 @ -40/-40	18,000 @ -35/-31	18,000 @ -35/-31	26,400 @ -35/-31	12,500 @ -40/-40	16,500 @ -40/-40	14,000 @ -35/-31	
Volatility (Noack), % loss	D5800	13.7	12.9	11.1	11.3	10.0	13.0	11.1	11.1	
Sulphated Ash, % wt	D874	0.70	0.70	0.70	0.70	0.70	0.70	0.89	0.87	
Sulphur, % wt	D4294	0.26***	0.26***	0.26***	0.26***	0.24***	0.27***	0.26	0.26	
Phosphorous, % wt	D4951	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	
Base Number (BN), mg KOH/g	D2896	7.5	7.5	7.5	7.5	7.5	7.4	8.0	8.0	
High-Temperature High-Shear (HTHS) Viscosity, cP @ 150°C	D4683	2.6	3.1	2.6	3.0	3.8	2.3	2.6	3.1	

The values quoted above are typical of normal production. They do not constitute a specification.

Learn more about us: petrocanadalubricants.com

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Committed to the disciplined operation of our business.



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^{*} Measured using D7094 closed cup method.

^{**} Measured using D5949.
*** Measured using D4951.