

TECH DATA SUPREME™ UHP HYBRID MULTIGRADE MOTOR OILS

INTRODUCTION

SUPREMETM UHP HYBRID motor oils, are formulated to meet the demanding needs of hybrid engines. Internal combustion (IC) engines, when combined with battery power, go through significantly more start-ups than a typical internal combustion engine. Engine start-up is the time in an engine's cycle where the most wear can occur. Enter SUPREME UHP HYBRID motor oils to provide the best protection for a hybrid IC engine's unique needs. Equipped to meet the needs of a hybrid IC engine by providing exceptional lubrication of critical engine parts, these fully synthetic formulations offer enhanced protection for the latest emission control systems, turbochargers and gasoline direct injection IC engines.

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

SUPREME UHP HYBRID motor oils are specially formulated to exceed the latest API Service Classification for gasoline engines, API SQ with Resource Conserving. Available in SAE 0W-20 and 0W-16 viscosity grades, they meet the needs of most hybrid vehicles.

SUPREME UHP HYBRID motor oils also exceed the latest ILSAC GF-7 standards. Additionally, the SAE 0W-20 grade is approved against GM's dexos® 1 Gen 3 global gasoline engine oil specification to meet the warranty requirements of GM vehicles that specify a dexos® 1 Gen 3 fluid.

FEATURES AND BENEFITS

Extended Engine Life

- Superior protection of the hybrid engine, meeting its unique needs
- Outstanding protection against wear, rust and corrosion
- Outstanding turbo-deposit control
- · Bearing life greatly extended
- Minimizes wear due to stop-start driving
- Improves engine performance through excellent aeration control
- Protects against low speed pre-ignition (LSPI) and accelerated timing-chain wear in GDI/TGDI IC engines

Our Best Resistance to High Temperature Thermal Breakdown

- Cleaner running engines
- Reduces deposits of varnish, sludge and carbon on engine parts
- Protects turbochargers from deposit formation
- Minimizes piston-ring sticking
- Improves lubrication because oil-ways stay clean

Our Best Low Temperature Fluidity

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

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.

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

IMPROVED FUEL ECONOMY PERFORMANCE

SUPREME UHP HYBRID 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. They not only provide better initial fuel economy, but they are better at maintaining it over the oil drain interval.

APPLICATIONS

SUPREME UHP HYBRID motor oils are recommended for year-round use in internal combustion gasoline hybrid engines. SUPREME UHP HYBRID motor oils meet or exceed new car warranty requirements for North American and Asian vehicles where ILSAC GF-7 or API SQ engine oils are recommended. They are fully back serviceable to previous ILSAC and API performance ratings including ILSAC GF-6 and API SP, SN, SN PLUS.

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

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

APPROVALS AND RECOMMENDATIONS

- * Approved or Licensed
- Suitable For Use
- ✓ Meets Specifications

Products	SUPREME HP Hybrid			
Products	0W-16	0W-20		
energy	★ SQ Resource Conserving	★ SQ Resource Conserving		
	✓ SP Resource Conserving*	✓ SP Resource Conserving*		
ILSAC	★ GF-7B	★ GF-7A		
	✓ GF-6B*	✓ GF-6A*		
CHRYSLER		• MS-6395		
Fird		✓ WSSM2C972-A1		
gm		★ dexos1® Gen 3 D330BDDE024		
ASIAN OEMs	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.			

^{*} back-serviceable

dexos® 1 Gen 3 supersedes dexos™ 1 Gen 2, dexos® 1 (First Generation), GM6094M and GM4718M.

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TYPICAL PERFORMANCE DATA

Provide	ASTM Test Method	SUPREME UHP HYBRID	
Property		0W-16	0W-20
Density, kg/L @ 15°C	D4052	0.844	0.845
Flash Point, COC, °C / °F	D92	202/396*	223/434
Pour Point, °C / °F	D5950	-45/-49	-45/-49
Kinematic Viscosity, cSt @ 40°C cSt @ 100°C	D445	38.8 7.4	44.1 8.4
Viscosity Index	D2270	160	169
Cold Cranking Viscosity, cP @ °C / °F	D5293	5,000 @ -35/-31	5,400 @ -35/-31
Borderline Pumping Viscosity, cP @ °C / °F	D4684	14,150 @ -40/-40	15,500 @ -40/-40
Volatility (Noack), % loss	D5800	11.3	10.6
Sulphated Ash, % wt.	D874	0.73	0.83
Sulphur, % wt	D4294	0.26	0.28
Phosphorus, % wt	D4951	0.07	0.08

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

Learn more about us: ${\bf petrocanadalubricants.com}$

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Committed to the disciplined operation of our business.



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^{*} Measured using D7094 closed cup method.