Technical Data Sheet

FormulaShell® Synthetic *SAE 5W-20 Motor Oil*

Full Synthetic Motor Oil

Has enhanced wear protection and outstanding resistance to thermal breakdown at operating temperatures.
Protects modern turbocharged engines - API SN PLUS, API SN and all previous categories.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

FORMULASHELL® SYNTHETIC MOTOR OIL meets or exceeds the North American warranty requirements for U.S., European and Japanese cars and light trucks with gasoline and gasoline turbo-charged engines where API SN PLUS, SN with Resource Conserving, SN, SM, SL, SJ etc. oils are specified.

Compared to conventional oils:

- Excellent lubrication at extremely low temperatures
- Our best engine protection at extremely high temperatures
- Lower oil consumption under high speed conditions
- Protection against harmful deposits and acids, which aids in a clean running and lasting engine
- Reduced volatility, less top-up.
- May be used at any time in an engine's life-cycle and is fully compatible with conventional engine oils.
- Low-Speed Pre-Ignition (LSPI) protection for modern turbocharged direct injection gasoline engines.

Main Applications

FORMULASHELL® SYNTHETIC MOTOR OIL is formulated for improved fuel economy and to provide engine protection and performance required by modern engines.

FORMULASHELL® SYNTHETIC MOTOR OIL is compatible with other conventional and synthetic oils. It exceeds all automobile and light truck warranty requirements for gasoline and turbocharged engines where API SN PLUS, API SN and ILSAC GF-5 oil is recommended.

It is also suitable for use in modern direct injection turbocharged gasoline engines where it provides protection against damaging low-speed pre-ignition (LSPI).

Specifications, Approvals & Recommendations

- General Motors GM 6094M
- Chrysler MS 6395
- Ford WSS-M2C945-A, M2C930-A

Exceeds the requirements of the following industry specifications:

- API SN PLUS
- API SN and all previous categories
- ILSAC GF-5

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Typical Physical Characteristics

Properties			Method	FormulaShell® Synthetic SAE 5W-20 Motor Oil
Kinematic Viscosity	@40°C	cSt	ASTM D445	47.27
Kinematic Viscosity	@100°C	cSt	ASTM D445	8.57
Viscosity Index			ASTM D2270	161
Dynamic Viscosity	@-30°C	cP	ASTM D5293	3960
MRV	@-35°C	cP	ASTM D4684	10300
Density	@15°C	kg/m^3	ASTM D4052	834
Flash Point		°C	ASTM D92	248
Flash Point		°C	ASTM D93	224

Properties		Method	FormulaShell® Synthetic SAE 5W-20 Motor Oil
Pour Point	°C	ASTM D97	-48

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health and Safety**

  This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from http://www.epc.shell.com

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

  Advice on applications not covered here may be obtained from your Shell or Shell Lubricants distributor representatives or technical help desks.

  Always follow manufacturer's recommendations and specifications for viscosity grade and API service.