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## Gasoline Engine

### TECHNICAL DATA SHEET

#### Product Description

ALES FULLY SYNTHETIC 5W20 is an advanced technology engine oil, formulated with high-performance fully synthetic base oils and fortified with a precisely balanced additive system. It is specifically designed to deliver a high level of performance and outstanding protection during extended service intervals. It is suitable for the latest downsized engines equipped with stop-start technologies, as well as hybrid engines requiring API SP specifications, where high viscosity index oils are preferred to enable longer oil drain intervals in modern engines. It provides maximum protection for the latest engine designs operating under severe conditions and protects against the risk of low-speed pre-ignition (LSPI) in these engines, including high-performance turbocharged gasoline direct injection (TGDI) and non-TGDI designs, supercharged gasoline engines, and certain diesel multi-valve fuel-injected systems.

#### Features & Benefits

- Outstanding protection & optimization of 3-way catalytic converters and due to its low Phosphorus content prevents them from poisoning, hence reduces NOx, HC and CO considerably.
- Excellent fuel economy & easy cold starts due to extreme fluidity at low temperatures.
- High resistant oil film even at high engine operating temperatures.
- Advanced additive technology, reduces sludge formation which improves engine cleanliness.
- Excellent oxidation & thermal stability, helps in extending oil drain intervals.
- Outstanding engine protection, helps maintain longer engine life and greater compatibility with engine seals.

#### Specifications

**ALES FULLY SYNTHETIC 5W20 meets or exceeds following International and Builder specifications:**

- API SP, SN Plus, SN, SM, SL, SJ (5W40 meets only this specs) • General Motors dexos1 Gen2
- API SP Resource Conserving, SN Plus Resource Conserving, SN Resource Conserving
- ILSAC GF-6A, HONDA, TOYOTA, MITSUBISHI • Ford WSS-M2C946-A/B1, WSS-M2C929-A (5W30 only)
- Ford WSS-M2C945-A/B1, WSS-M2C930-A (5W20 only)

#### Application

ALES FULLY SYNTHETIC 5W20 is suitable for use in following:

- Passenger cars, SUVs, light trucks and vans.
- Suitable for downsized Gasoline engines equipped with Stop & Start technologies and hybrid.
- Suitable for all types of modern vehicles, including high-performance turbo-charged, supercharged gasoline multi-valve fuel injected engines
- Excluded service includes - commercial and racing applications, frequent towing or hauling, extremely dusty or dirty conditions or excessive idling.

### Typical Characteristics

ALES FULLY SYNTHETIC 5W20	Test Method	Units	5W-20	5W-30	5W-40
Density @ 15 °C	ASTM D 4052	gm/cc	0.845	0.845	0.850
Viscosity @ 100 °C	ASTM D 445	cSt	8.2	10.4	14.30
Viscosity @ 40 °C	ASTM D 445	cSt	43.05	58.65	88.6
Viscosity Index	ASTM D 2270	-	169	169	168
Pour Point	ASTM D 97	°C	-39	-39	-39
Flash Point (COC)	ASTM D 92	°C	215	225	225
Total Base Number	ASTM D 2896	mg KOH/g	7.2	7.2	7.2
Phosphorous	ASTM D 4951	% wt	0.077	0.077	0.077
CCS Viscosity	ASTM D 5293	cP	5250 @ -30 °C	5600 @ -30 °C	5600 @ -30 °C

*The above figures are typical of blends with normal production tolerance and do not constitute a specification.*

For further information, please contact: [www.alesoil.com](http://www.alesoil.com)