

# TECHNICAL DATA

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# 6520 SynShield® All Performance Full Synthetic 5W-20

SynShield® All Performance Full Synthetic SAE 5W-20 is a premium quality full synthetic, multi-grade engine oil that is specifically formulated to protect gasoline fueled automobile and light duty trucks, including those that are turbocharged and/or supercharged.

SynShield® All Performance Full Synthetic SAE 5W-20 provides superior protection for new and high mileage engines.

SynShield® All Performance Full Synthetic SAE 5W-20 is blended from a unique combination of select synthetic base fluids, advanced additive package and highly shear stable viscosity index improver to provide the following advantages:

#### **PERFORMANCE**

- o Extended engine life and oil drains
- Decreased oil consumption
- o Improved oxidation stability and reduced deposits, sludge and varnish
- o Increased engine fuel economy benefits
- o Protects vehicle emission system components

## **DEPOSIT PROTECTION**

- Excellent protection against sludge and varnish formation
- Unsurpassed turbocharger protection from deposit formation
- o Provides excellent cleanliness for pistons and critical engine parts
- o Reduction in the problems that can result from the use of ethanol blended fuels

#### WEAR PROTECTION

- Excellent protection of turbocharged direct injection engines from damage
- Superior protection against rust and corrosion
- Substantial wear protection to reduce wear and damage to critical engine parts
  - 29% Better wear protection vs. API and GM wear limits
- o Superior Low-Speed Pre-ignition (LSPI) protection even as oil ages
- Lower timing chain and intake valve wear
  - 37% Better protection against timing chain wear and elongation vs. API and GM limits
  - o 48% Lower valvetrain wear (iron ppm) vs. API and GM limits
- Protection from metal-to-metal contact across a wide operating temperature range.

SynShield® All Performance Full Synthetic SAE 5W-20 also contains two proven frictional modifiers Micron Moly® and Schaeffer Mfg's own proprietary additive Penetro®. These two proven frictional modifiers once plated form a long lasting, slippery, tenacious lubricant film, which prevents the metal surfaces from coming into contact with each other. By preventing metal-to-metal contact, damaging frictional wear is reduced which results in reduced wear, increased engine life and lower maintenance costs.

SynShield® All Performance Full Synthetic SAE 5W-20 is formulated for use in the following applications: API Service Classification SQ, Resource Conserving; ILSAC GF-7A; MIL-PRF-46152E; CID A-A-52039B; Ford WSS-M2C945-A; WSS-M2C945-B1; WSS-M2C930-A; WSS-M2C925-A; WSS-M2C960-A1; GM dexos1® Gen3\*; General Motors 6094M; Chrysler MS-6395 and MS-9214; Toyota and Honda Service Fill Specifications.

Using Schaeffer synthetic lubricants does not void your new vehicle warranty or equipment manufacturer's warranty. All Schaeffer lubricants are covered by our Limited Warranty.

## **TYPICAL PROPERTIES**

| SAE Grade  | 5W-20       |
|--|-------------|
| Specific Gravity (ASTM D1298)                                      | 0.85        |
| Viscosity @ 40°C, cSt (ASTM D445)                                  | 45.0-52.0   |
| Viscosity @ 100°C, cSt (ASTM D445)                                 | 8.5 - 9.15  |
| Viscosity Index (ASTM D2270)                                       | 163         |
| High Temperature/High Shear Viscosity 302°F/150°C (ASTM D4683), cP | 2.7         |
| Cold Cranking Viscosity (ASTM D5293)                               |             |
| @-30°C, cP   | 3,187       |
| Mini Rotary Viscosity TP-1 @ -35°, cP (ASTM D4684)                 | 11,200      |
| Flash Point °F/°C (ASTM D92)                                       | 455°/235°   |
| Stable Pour Point °F/°C (FTM 7916 Method 203)                      | <-41°/<-42° |
| Total Base Number (ASTM D2896)                                     | 8.0         |
| Sulfated Ash Content % wt (ASTM D874)                              | 0.9%        |
| Shear Stability (ASTM D6278)                                       |             |
| Minimum 6.9  | 7.5         |
| Copper Strip Corrosion Test (ASTM D130)                            | 1a          |
| NOACK Volatility %Evaporation Loss (ASTM D5800)                    | 11.1%       |
| Foam Test (ASTM D892)  |             |
| Sequence I   | 0/0         |
| Sequence II  | 10/0        |
| Sequence III   | 0/0         |
| High Temperature Foam Test (ASTM D6082 Option A)                   | 30/0        |
| Engine Rusting Ball and Rust Test (ASTM D6557)                     | 400         |
| Average Gray Value   | 130         |
| % Phosphorous (ASTM D4951)   | 0.073       |

<sup>\*</sup>The use of OEM names, trademarks or specifications does not represent approval, recommendation, or licensing by the OEM.