

# Super S® SuperSyn™ Heavy Duty Engine Oil



## TECHNICAL PRODUCT INFORMATION

### **Super S SuperSyn Heavy Duty Engine Oil**

**SuperSyn™ Heavy Duty Engine Oil** is a premium quality, high performance formulation of 100% synthetic base oils and the most advanced additive technology available that meets or exceeds the service requirements of virtually all diesel engine manufacturers; both 2007 emission compliant and older engines, as well as new engines using SCR or EGR systems for 2010 EPA emission compliance. It is suitable for virtually all on- and off-highway service applications and can be used in extended drain service programs.

**SuperSyn™ Heavy Duty Engine Oil** is manufactured to our Advanced Quality Assurance™ standards of quality control that exceed industry standards. Every batch is laboratory tested from base stocks and additives to finished product to consistently deliver an exceptional level of performance and protection.

### **FEATURES/ BENEFITS**

- Full Synthetic base stock provides outstanding oxidation resistance and resistance to sludge formation
- Formulated for high heat, high stress operating environments
- Meets or exceeds requirements of today's high performance, low emission diesel engines
- Provides excellent performance in older engines allowing operators use of one oil for many engines
- Provides significantly improved wear protection, deposit and viscosity control, and oxidation resistance
- Provides excellent protection and durability demonstrated in control of valve train wear and piston ring and liner wear, helping to prolong engine life
- Improved soot control and an exclusive detergent system for outstanding engine cleanliness
- Exceptional low temperature flow properties helps to protect engine components and speed cold starts
- Reduced fuel consumption
- Outstanding performance reserve provides protection and lubrication throughout the entire oil drain interval
- Capable of supporting extended drain programs
- Outstanding shear stability for viscosity control
- Simplifies inventories - one oil for all your 4-stroke engines; gasoline and diesel

### **APPLICATIONS**

- Engines calling for API Service Classification CJ-4, CI-4 Plus, CI-4 or SM, SL, SJ
- Meets the needs of all 4-stroke engines in a fleet in the appropriate viscosity grades
- Available in 5W-40 and 10W-30 for even better fuel economy, and cold weather starting
- Reduces the time needed on block heaters in cold climates
- Satisfies requirements for naturally aspirated and turbocharged engines
- All 2007 and 2010 emissions compliant engines
- Excellent for use in engines with shorter piston crowns, higher power density, inter-cooling, electronic fuel management, exhaust gas recirculation, and exhaust particulate traps
- Meets needs of the older engines in on-highway service
- Satisfies off-highway engines calling for multi-grade engine oils
- Works well with both on- and off-highway diesel fuels

### **RECOMMENDATIONS/SPECIFICATIONS**

**SuperSyn™ Heavy Duty Engine Oil** is licensed as: API Service Categories CJ-4, CI-4 Plus, CI-4/SM  
It meets requirements of :

API Service Categories CH-4, CG-4, CF-4 and SL, SJ, SH

ACEA - E7

Cummins - CES 20081

DHD-1

Mack - EO-O Premium Plus 07

Mercedes-Benz - 228.31

Renault - VI RLD-3

Caterpillar - ECF-1, ECF-2, ECF-3

Detroit Diesel - 93K218

Ford WSS-M2C171-E

MAN - M3275

Navistar

Volvo - VDS 4

**SPECIAL HANDLING, NOTICES OR WARNINGS**

Use the same care and handling as for any petroleum product.

**TYPICAL CHARACTERISTICS**

| <b>Super S SuperSyn™ Heavy Duty Engine Oil</b> |                                |                                    |           |           |
|--|--------------------------------|------------------------------------|-----------|-----------|
| <i>Properties</i>                              | <i>Test Method<br/>ASTM D-</i> | <i>Typical Results</i>             |           |           |
| SAE Viscosity Grade                            |                                | 5W-40                              | 10W-30    | 15W-40    |
|  |                                | Full Synthetic Base                |           |           |
| API Gravity                                    | 1298                           | 28.8                               | 30.8      | 28.6      |
| Flash Point, COC °C /°F                        | 92                             | 238/460                            | 232/449   | 238/460   |
| Pour Point, °C /°F                             | 97                             | -31/-28                            | -27/-17   | -31/-23   |
| Viscosity                                      | 445                            |                                    |           |           |
| cSt @ 40°C                                     |                                | 110.5                              | 86.0      | 101.0     |
| cSt @ 100°C                                    |                                | 13.1                               | 13.8      | 14.3      |
| Viscosity Index                                | 2270                           | 145                                | 165       | 143       |
| CCS Viscosity (mPa·s)                          | 5298                           | <6600@-30                          | <7000@-25 | <7000@-20 |
| Sulfated Ash wt%                               | 874                            | 1.0 max                            | 1.0 max   | 1.0 max   |
| TBN  | 2896                           | 7.5                                | 7.5       | 7.5       |
| API Service Category                           |                                | Licensed for CJ-4, CI-4+, and CI-4 |           |           |

Typical test data are average values only.

Minor variations which do not affect product performance are to be expected during normal manufacturing.

**PRODUCT NUMBERS**

**SAE 5W-40**

**SAE 10W-30**

**SAE 15W-40**

- SUS 295-3            3/1 gallon bottles
- SUS 295            6/1 gallon bottles
- SUS 295-5        5 gallon pail
- SUS 297            55 gallon drum
- SUS 297bulk       Bulk