

PRODUCT INFORMATION

ECOSE[®] PREMIUM MOTOR OILS

ECOSE[®] Motor Oils are formulated from highly refined base oils and an advanced, thermally stable additive package designed to meet the lubricating demands and severe operating conditions in today’s higher-revving, hotter running engines. These products meet or exceed the latest automotive manufacturer’s requirements, including **API Performance Category SN Plus** helping to protect against low speed pre-ignition (**LSPI**)¹ in turbocharged gasoline direct-injection engines (**TGDI**).

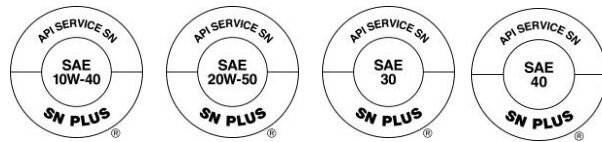
FEATURES AND BENEFITS:

ECOSE[®] Premium Motor Oils provide very good low temperature pumpability and lower phosphorus levels for improved emission system performance. In addition, they also provide the following:

- Good anti-foaming characteristics and shear stability
- Resistance to thermal breakdown at high temperatures
- Excellent protection from engine sludge and varnish deposits
- Excellent anti-wear properties and bearing corrosion protection

APPLICATIONS:

ECOSE[®] Premium Motor Oil SAE 10W-40, 20W-50, 30 and 40 viscosity grades are recommended for use in gasoline engine applications where motor oils of a higher viscosity are desired, particularly in applications involving high temperatures and severe duty service such as hauling boats and camping trailers at sustained high speeds for long periods of time. **ECOSE[®] Premium Motor Oils** meet **API Service Category SN Plus** which is specified in most new car owner’s manuals but are also suitable for use in all earlier model vehicles calling for API service SN, SM and SJ quality oils. In all cases, the car or engine manufacturer’s lubricant recommendations for API performance category and SAE viscosity grade should be followed (*consult vehicle’s owner’s manual*).



Typical Properties

| SAE Grade | Test Method | 10W-40 | 20W-50 | 30 | 40 |
|---|-------------|------------|------------|---------|---------|
| Product Code | | 530135 | 530137 | 530163 | 530164 |
| API Gravity, 60°F | ASTM D-4052 | 31.9 | 30.0 | 30.2 | 29.4 |
| Density, lbs/gal (g/L) | Calculated | 7.21 | 7.29 | 7.28 | 7.32 |
| Kinematic Viscosity, cSt @ 40°C, D-445 | ASTM D-445 | 112.0 | 155.0 | 89.5 | 130.0 |
| Kinematic Viscosity, cSt @ 100°C, D-445 | ASTM D-445 | 15.5 | 18.7 | 11.1 | 14.3 |
| Viscosity Index, calculated | ASTM D-2270 | 146 | 136 | 110 | 109 |
| Cold Cranking @ temp (°C) ,cP | ASTM D-5293 | 6300 @ -25 | 6,000 @-15 | N/A | N/A |
| Color | ASTM D-1500 | L3.5 | L3.5 | L3.5 | L3.5 |
| Pour Point, (°F) | ASTM D-5949 | -33 | -22 | -11 | -7 |
| Flash Point, COC, (°F) | ASTM D-92 | 458 | 470 | 465 | 465 |
| Highest API Performance | | SN Plus | SN Plus | SN Plus | SN Plus |

**Note: Values shown are typical only and do not constitute a specification. Minor variations in product are to be expected in normal manufacturing. Always confirm with the original manufacturer’s recommendation for proper equipment operating requirements.*

¹ *LSPI is a premature ignition of the air-fuel mixture in the combustion chamber. This low-speed pre-ignition is very violent and causes over pressurization of the combustion chamber that can lead to damage and failure of the piston, rings, valves, and other internal components.*

AVAILABILITY:

ECOSE[®] Premium Motor Oils are available throughout Nu-Tier Brands’ marketing area. Your Nu-Tier representative can provide specific information. Need additional information? Call Nu-Tier Brands @ 1-877-771-LUBES (5823) or visit Nu-Tier Brands.com