

## ADVANTAGE EUROPEAN PASSENGER CAR ENGINE OILS

### OVERVIEW

ADVANTAGE EURO FULL SYN passenger car engine oils are designed to meet the high standards of lubrication for modern naturally aspirated, turbo-charged and super-charged engines. Designed for the latest high performance European gasoline and diesel engines, ADVANTAGE EURO FULL SYN products maintain extended drain intervals and enhanced fuel economy, while providing superior oxidation protection, and low temperature flow properties.

### FEATURES & BENEFITS

ADVANTAGE EURO FULL SYN engine oil products provide superior engine wear protection by inhibiting the formation of sludge and varnish as well as rust and bearing corrosion. ADVANTAGE EURO FULL SYN engine oil products use synthetic base stocks and advanced additive systems and have excellent viscosity and thermal breakdown properties at higher temperatures, while still providing protection during cold starts. They are low volatility oils leading to reduced oil consumption.

### APPLICATIONS

ADVANTAGE EURO FULL SYN engine oil products are suitable for use against a wide range of North American and European performance requirements. ADVANTAGE EURO FULL SYN oils are a "reduced SAPS" product designed for modern engines fitted with aftermarket devices to help OEM's comply with environmental emissions legislation. ADVANTAGE EURO FULL SYN PLUS are "full SAPS" products with excellent TBN retention and viscosity increase control essential for extended drain applications. ADVANTAGE EURO FULL SYN V is specifically formulated for low-SAPS, Euro IV emissions standard complaint diesel engines and almost all model year 2000 and newer VAG passenger car diesel engines with extended service intervals, unitary injector pumps, and "PD" engines.

### SPECIFICATIONS

5W-30 EURO: API SN • GM dexos2 • ACEA C3-10 • MB 229.31 • MB 229.51 • BMW LL-04 • RENAULT RN 0700 • VW 502.00

5W-40 EURO: API SN • GM dexos2 • ACEA C3-10 • MB 229.31 • MB 229.51 • BMW LL-04 • PORSCHE A40 • RENAULT RN 0700/0710 • VW 502.00

0W-40 EURO PLUS: API SN/CF • ACEA A3/B4-12 • MB 229.3 • MB 229.5 • BMW-LL-01 • PORSCHE A40 • RENAULT RN 0700/0710 • VW 502.00/505.00

5W-30 EURO PLUS: API SL • ACEA A3/B4-12 • MB 229.3 • MB 229.5 • BMW-LL-01 • RENAULT RN 0700 • VW 502.00/505.00

5W-40 EURO PLUS: API SN • ACEA A3/B4-12 • MB 229.3 • MB 229.5 • MB 226.5 • BMW-LL-01 • PSA B71 2290 • PORSCHE A40 • RENAULT RN 0700/0710 • VW 502.00/505.00

5W-30 EURO SYN V: API SL • ACEA C3-12 • MB 229.51 • BMW-LL-01 • PORSCHE C30 • VW 504.00/507.00

### TYPICAL PROPERTIES

PRODUCT CODES	650	651	655	652	653	654
Property	5W30 EURO	5W-40 EURO	0W-40 EURO PLUS	5W-30 EURO PLUS	5W-40 EURO PLUS	5W-30 EURO SYN V
Specific Gravity @ 60°F	.0852	0.852	0.821	0.858	0.858	0.850
Viscosity, cSt @ 100°C	12.1	13.2	14.0	11.6	13.2	13.9
Viscosity, CCS cP @ -30°C	5640	5710	5400	5780	0.850	6300
Phosphorous, Wt. (%)	0.080	0.080	0.080	0.099	0.099	0.095
Zinc, Wt. (%)	0.088	0.088	0.088	0.11	0.11	0.104
High Temp. / High Shear (HTHS) cP @150°C	3.5	3.6	3.2	3.4	3.7	3.7
NOACK, Wt. (%)	10.0	10.0	10.0	10.0	10.0	14.2
TBN	8	8	8	10	10	9