



European Formula Motor Oil



Mighty Engine Guard Full Synthetic Euro is a premium quality, full-synthetic, Low-SAPS motor oil designed to provide maximum protection for European passenger cars under all operating conditions. It also is recommended for other vehicles operating at extreme temperatures or under severe driving conditions, such as towing heavy loads. It is recommended for use in many gasoline and light-duty diesel engines, including VW TDI diesel engines with unit injectors, diesel engines without DPF, and select diesel engines with DPF.



Features and Benefits

- ✓ *Better oxidation and deposit control. New engine design strategies for some OEMs result in higher operating temperatures and the need for greater protection*
- ✓ *Unsurpassed wear protection. Advanced molecules bond together to prevent metal-to-metal contact of rotating engine parts*
- ✓ *Retains viscosity and prevents thermal breakdown. The oil excels even in the harshest conditions*
- ✓ *100% pure synthetic oils. Contains uniform molecules that provide the best, longest-lasting engine protection and performance*



Industry/OEM Specifications and Licenses



Viscosity	Quarts	Bag N' Box	Drums	Totes	Bulk
5W/40	✓	✓	✓	✓	*

EG European Motor Oil Formula

Typical Properties

Viscosity Grade	5W/40	
Boron, wt. %	ASTM D5185	0.007
Calcium, wt. %	ASTM D5185	0.26
Cold Cranking Simulator at (°C), cP	ASTM D5293	6083 (-30)
Color	ASTM D1500	2
Gravity, °API	ASTM D287	33.98
High Temperature / High Shear Vis at 150°C, cP	ASTM D5481	3.7
Nitrogen, wt. %	ASTM D4629	0.089
Noack Volatility, % loss	ASTM D6375	10
Phosphorus, wt. %	ASTM D5185	0.092
Pour Point °C (°F)	ASTM D5950	-45°C (-49°F)
Pumping Viscosity at (°C), cP	ASTM D4684	28,234 (-35)
Shear Stability, Final Viscosity in cSt	ASTM D6278	8.5
Specific Gravity @ 60°F (15.6°C)	ASTM D4052	0.8551
Sulfur, wt. %	ASTM D4951	0.19
TBN, mgKOH/g	ASTM D2896	9.8
Viscosity @ 100°C cSt	ASTM D445	13.18
Viscosity @ 40°C cSt	ASTM D445	77.27
Viscosity Index	ASTM D2270	173
Zinc, wt. %	ASTM D5185	0.102

Industry/OEM Approvals

Title	5W/40
API SN	Approved
ACEA A3/B3 and A3/B4	Meets Requirements
API SH, SG, SF, SE, SD, SC	Meets Requirements
API SM	Meets Requirements
BMW LL-01	Meets Requirements
MB p229.3/p229.5	Meets Requirements
OPEL GM-LL-B-025	Meets Requirements
Porsche A40	Meets Requirements
Renault 0710/0700	Meets Requirements
VW 501 01 / 502 00 / 505 00	Meets Requirements

*Check for availability.