



EMERALDLUBES

## EMERALD SYNTHETIC BLEND MOTOR OIL

Extra protection and peace of mind when compared with conventional oil

**EMERALD 5W-20 SYNTHETIC BLEND** - API SN PLUS  
**EMERALD 5W-30 SYNTHETIC BLEND** - API SN PLUS  
**EMERALD 10W-30 SYNTHETIC BLEND** - API SN PLUS



Meets or exceeds API SN PLUS and ILSAC GF-5 requirements.

**EMERALD LUBRICANTS** are engineered to provide greater overall value and unsurpassed protection for today's engines and equipment designs.

**PROTECTION** controls friction and wear 65% greater than the latest API requirements.<sup>1</sup>

**POWER** provides a strong film barrier to control friction, resist wear, and prevent metal-to-metal contact.

**ENDURANCE** stands up to heat and shearing which extends oil life.

<sup>1</sup>As measured against the Sequence IV Average Cam Wear Limit for API SN.

### BENEFITS

Delivers better oxidation and deposit control. New engine design strategies for some OEMs result in higher operating temperatures and the need for greater protection.

Includes additives technology that helps to keep engines clean.

Meets or exceeds US and import car and light truck warranty requirements for most automotive gasoline engines currently in use.

### APPLICATIONS

Provides extra performance benefits for passenger cars, light trucks and sport utility vehicles, plus new and rebuilt engines.



# EMERALD SYNTHETIC BLEND MOTOR OIL

## TYPICAL PHYSICAL PROPERTIES

PROPERTIES	TEST METHOD	TYPICAL RESULTS		
		5W-20 SYNTHETIC BLEND API SN PLUS	5W-30 SYNTHETIC BLEND API SN PLUS	10W-30 SYNTHETIC BLEND API SN PLUS
Gravity, °API	ASTM D287	33.09	33.32	32.37
Specific Gravity at 60°F (15.6°C)	ASTM D4052	0.8597	0.8585	0.8635
Flash Point, °C	ASTM D92	206	218	206
Flash Point, °F	ASTM D92	403	424	403
Viscosity at 40°C, cSt	ASTM D445	51.33	66.92	63.85
Viscosity at 100°C, cSt	ASTM D445	8.738	11.11	10.35
Viscosity Index	ASTM D2270	149	159	150
Pour Point, °C (°F)	ASTM D5950	-45°C (-49°F)	-45°C (-49°F)	-42°C (-44°F)
Cold Cranking Simulator at (°C), cP	ASTM D5293	6305 (-30°C)	6119 (-30°C)	4000 (-25°C)
High Temperature / High Shear Vis at 100°C, cP	ASTM D6616	6.01	6.94	7.04
High Temperature / High Shear Vis at 150°C, cP	ASTM D5481	2.72	3.14	3.08
Noack Volatility, % loss	ASTM D6375	14.8	14.2	14.5
Color	ASTM D1500	3	3	3
Zinc, wt. %	ASTM D5185	0.085	0.085	0.085
Phosphorus, wt. %	ASTM D5185	0.077	0.077	0.077
Calcium, wt. %	ASTM D5185	0.132	0.132	0.132
Sulfur, wt. %	ASTM D4951	0.3	0.3	0.3
Magnesium, wt. %	ASTM D5185	0.043	0.043	0.043
Boron, wt. %	ASTM D5185	0.018	0.018	0.018
Molybdenum, wt. %	ASTM D5185	0.004	0.004	0.004
Sulfated Ash, wt. %	ASTM D874	0.92	0.92	0.92
Nitrogen, wt. %	ASTM D4629	0.086	0.086	0.086
Pumping Viscosity at (°C), cP	ASTM D4684	23,600 (-35°C)	28,400 (-35°C)	15,900 (-30°C)
Shear Stability, Final Viscosity in cSt	ASTM D6278	7.31	8.5	8.54
Foam Seq. I (Tendency/Stability), mL	ASTM D892 (Opt. A)	0/0	0/0	0/0
Foam Seq. II (Tendency/Stability), mL	ASTM D892 (Opt. A)	0/0	0/0	0/0
Foam Seq. III (Tendency/Stability), mL	ASTM D892 (Opt. A)	0/0	0/0	0/0
High Temperature Foaming, static foam	ASTM D6082 (Opt. A)	30/0	20/0	20/0
TBN, mgKOH/g	ASTM D2896	7.0	7.0	7.0
INDUSTRY / OEM APPROVALS				
API SJ, SH, SG, SF, SE, SD, SC		Meets Requirements	Meets Requirements	Meets Requirements
API SL, SM		Meets Requirements	Meets Requirements	Meets Requirements
API SN, SN PLUS		Approved	Approved	Approved
Chrysler MS-6395		Meets Requirements	Meets Requirements	Meets Requirements
Chrysler MS-10797		Meets Requirements	-	-
Ford WSS M2C945-B1, M2C945-A, M2C930-A, M2C153		Meets Requirements	Meets Requirements	-
GM 6094M		Meets Requirements	Meets Requirements	Meets Requirements
ILSAC GF-4, GF-3, GF-2, GF-1		Meets Requirements	Meets Requirements	Meets Requirements
ILSAC GF-5		Approved	Approved	Approved
VM Standard 504 00		-	Approved	-
VM Standard 507 00		-	Approved	-