



## Heavy Duty SAE 20W-50 Motor Oil

**SAMS1 SAE 20W-50 Heavy Duty Motor Oil** is a superior quality multi-grade motor oil designed for maximum engine protection even under the toughest driving conditions. It outperforms conventional motor oil, reduces friction and wear at start-up and protects your engine against performance robbing sludge and varnish deposits. It is recommended for passenger cars, light trucks, sport utility vehicles and other mobile and stationary engines.

**SAMS1 SAE 20W-50 Heavy Duty Motor Oil** is fully licensed to meet or exceed American Petroleum Institute (API) SN service classifications and is backwards compatible with all earlier API classifications. SAMS1 SAE 20W-50 Synthetic Blend Motor Oil has been field tested to be comparable to American, European and Japanese manufacturers' requirements for American, European and Japanese manufacturers' warranty standards: ACEA A1/B1 & A5/B5, Chrysler MS 6395, and GM 6094M (now obsolete) and is suitable for many Ford, Chrysler, Honda, Mazda, Mitsubishi, Toyota and other vehicles where an premium API SN motor oil is recommended.

### Benefits and Applications

- API SN and prior SM, SL, SJ Service Classifications
- Lower pour point reduces start-up wear during cold weather
- Synthetic blend oil helps to improve fuel economy
- Compatible with conventional oils
- Advanced viscosity control and shear stability
- Excellent wear, corrosion, and rust protection
- Excellent resistance to sludge and varnish deposit formation
- Designed with premium base stocks for added thermal breakdown resistance



### Typical Characteristics - Heavy Duty SAE 20W-50

SAE GRADE		20W-50
API SERVICE		SN
API Gravity	ASTM D287	32.5
Flash Point, COC °C/°F	ASTM D92	210/410
Pour Point, °C/°F	ASTM D97	-45/-49
Viscosity @ 40°C, cSt	ASTM D445	64.6
Viscosity @ 100°C, cSt	ASTM D445	10.8
Viscosity Index	ASTM D2270	159
CCS, mPa-sec, @ °C max	ASTM D5293	6600 @ -30
Phosphorus, wt% max	ASTM D4951	0.08
Total Base No. TBN	ASTM D2896	7.9

Test Method ASTM - Typical test data are average values only. Minor variations, which do not affect performance, may occur.

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HANDLING AND SAFETY INFORMATION - Refer to SAMS1 (SDS) Safety Data Sheets for proper handling and safety information. Use the same care and handling as for any petroleum product. Nothing herein shall be deemed to constitute a warranty, express or implied, that said information or data are correct or that the products described are merchantable or fit for a particular purpose, or that said information, data or products can be used without infringing patents of third parties.