



PETROLEUM QUALITY INSTITUTE OF AMERICA

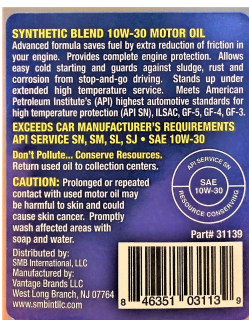
The Data Speak for Itself...

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Product Tested



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SMB International, LLC

Company and Product Information

Corporate Office:
SMB International, LLC
West Long Branch, NJ 07764

Website(s): www.smbintl.com

SMB (Superior Motoring Benefits) Synthetic Blend 10W-30 SAE Motor Oil

Product: SMB Synthetic Blend
Viscosity Grade: SAE 10W-30
Labeled: API SN/ILSAC GF-5

Distributed By: SMB International, LLC, West Long Branch, NJ
Manufactured By: Vantage Brands LLC, West Long Branch, NJ
Purchased at: Northwood, OH
Date of purchase: 11/19/2018

Website(s): www.smbintl.com

Test Results and Assessment:

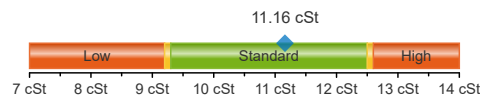
Whereas the results of the tests conducted on this sample meet the SAE J300 specifications for the SAE Viscosity Grade listed on the product label, the phosphorus level in the product is 5% higher than the specification for the listed API Service Categories.

Whereas nearly all motor oils sold in bottles in the US contain 32 fluid ounces, consumers should note that the SMB product tested is sold in a 16 fluid ounce bottle.

	Physical Properties	●
	Elemental Analysis	●
	Labeling	●

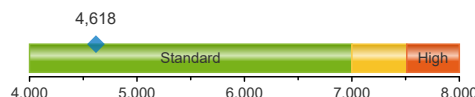
Viscosity @ 100°C, cSt (ASTM D445)

The results of the Kinematic Viscosity @ 100°C test conducted on this sample meet the requirements of SAE J300.



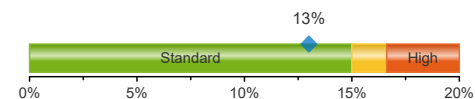
Cold Cranking Viscosity, mPa s (cP) (ASTM D5293)

The results of the Cold Cranking Viscosity test conducted on this sample meet the requirements of SAE J300.



Volatility, mass % loss, 1 hr, @ 250°C (ASTM D5800)

The results of the Volatility, mass % loss, 1 hr, @ 250°C test conducted on this sample meet the requirements of API SN/ILSAC GF-5.



Phosphorus, ppm (ASTM D5185)

The results of the Phosphorus test conducted on this sample do not meet the requirements of API SN/ILSAC GF-5.



Note¹: Although laboratory tests alone cannot be used to establish if engine oil meets an API Service Category, they can be used to determine if it doesn't.
Note²: The specification for cold cranking viscosity includes only a maximum value; the minimum value shown in the "standard" area of the chart is truncated for illustrative purposes.

PHYSICAL TESTS (click for test details) - a	Standard	SMB
TBN, mg KOH/g (ASTM D2896)		8.62
Viscosity @ 100°C, cSt (ASTM D445)	9.3 to <12.5	11.16
Viscosity @ 40°C, cSt (ASTM D445)		71.36
Viscosity Index (ASTM D2270)		148
Viscosity @ -25°C mPa s (cP) (ASTM D5293)	7,000 Max	4,618
Volatility, mass % loss, 1 hr, @ 250°C (ASTM D5800)	15 Max -c	13.0
ELEMENTAL ANALYSIS (click for test details) - a, b		
Additives		
Calcium, ppm		1,593

Magnesium, ppm		486
PHYSICAL TESTS (click for test details) - a		
	Standard	SMB
Phosphorus, ppm	600 to 800 -d	895
Zinc, ppm		965
Molybdenum, ppm		48
Barium, ppm		<1
Boron, ppm		229
Silicon, ppm		10
Potassium, ppm		<5
Manganese, ppm		<1
Titanium, ppm		<1
Copper, ppm		<1
Sodium, ppm		<5
Vanadium, ppm		<1
Contaminants		
Silver, ppm		<1
Aluminum, ppm		<1
Chromium, ppm		<1
Iron, ppm		1
Nickel, ppm		<1
Lead, ppm		<1
Antimony, ppm		<1
Tin, ppm		<1
<p>a. Standards, shown in yellow are established by API, SAE and others. b. Test Method for metal analysis is ASTM D5185. c. This specification is expressed to two significant figures, therefore results up to 15.5 are considered on specification. d. This specification is expressed to one significant figure, therefore results between 550 and 849 are considered on specification.</p>		

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