



A Subsidiary of PETRONAS Chemicals Group

PRODUCT DATA SHEET

Petrolad[®] 9330

Light-Duty Engine Oil Additive Package
For SN Performance Level

BRB Lube oil Additives & Chemicals

P.O. Box 3552 NL - 6017 ZH Thorn
Office: Voltaweg 26, 6101 XK, Echt, the Netherlands
T: +(31) 475 560 300

www.brb-international.com/lac

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Product Description

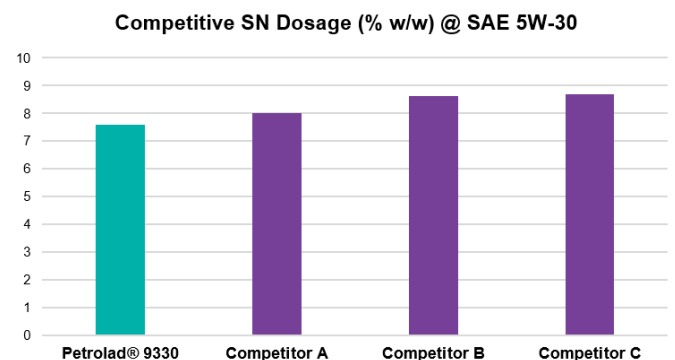
Petrolad® 9330 is a high-quality additive package, designed to meet the SN performance requirements of gasoline engine oils, where no API certification is needed. It offers very competitive treat rates for several 5W-XX and 0W-XX viscosity grades, required by efficient, modern passenger cars. The product is suitable for various mineral and synthetic blends, while exhibiting particularly great results in GR III/II base stocks across multiple geographic regions.

Benefits

- Excellent high-temperature, high-shear (HTHS) viscosity performance of the finished engine oil blend;
- Outstanding anti-wear & anti-oxidation results, significant deposit control & minimalised foaming;
- A strong contribution to fuel economy;
- Aimed at lower-viscosity engine oils in out-of-warranty cars - particularly ones in Asia, where the average ages of vehicles tend to be shorter than those of Europe or the Americas, for example;
- Bundle possibilities with our viscosity modifier technology Viscotech®, which targets mid-/top-tier PCMO;
- Optimised costs due to its low treat rate(s) & the simultaneous performance coverage of other light-duty API specs, which helps versatile engine oil blenders with single-sourcing.

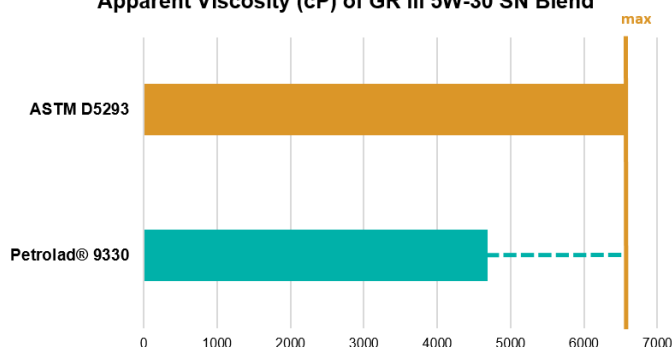
Performance

Dosage (% w/w)*	API Specification		
Viscosity Grade	SN	SM	SL
SAE 0W-20	8,5	-	-
SAE 0W-30	8,5	-	-
SAE 5W-30	7,6	7,3	-
SAE 5W-40	7,6	-	-
SAE 10W-30	-	7,3	-
SAE 10W-40	-	-	7,0
SAE 15W-40	-	7,3	-

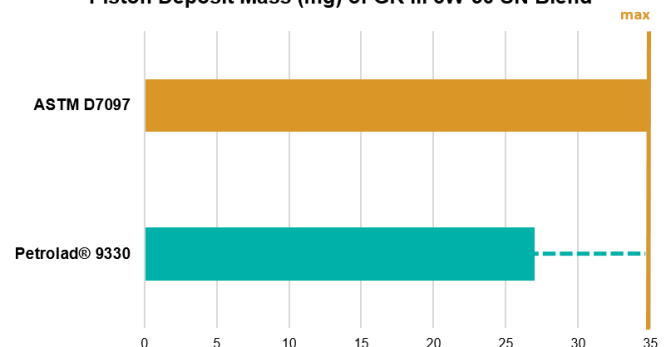


*The above table shows the key performance levels. Please contact our technical service for more profiles.

Cold-Cranking Simulator (CCS) @ -30 °C
Apparent Viscosity (cP) of GR III 5W-30 SN Blend



TEOST Moderately High-Temperature (MHT)
Piston Deposit Mass (mg) of GR III 5W-30 SN Blend



Note: For both tests above, the blend based on Petrolad® 9330 also included our Viscotech® 6540L 1300 cSt OCP VM.

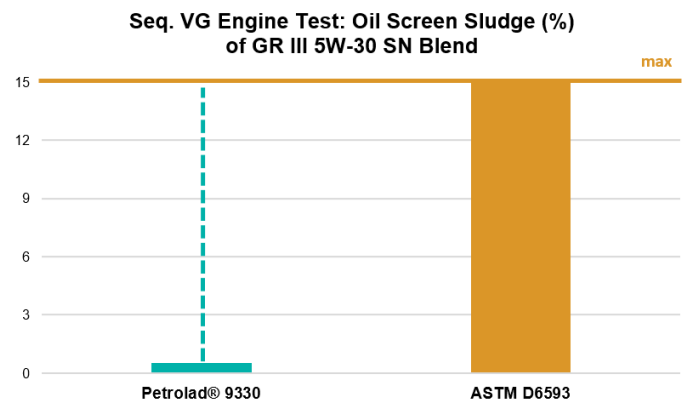
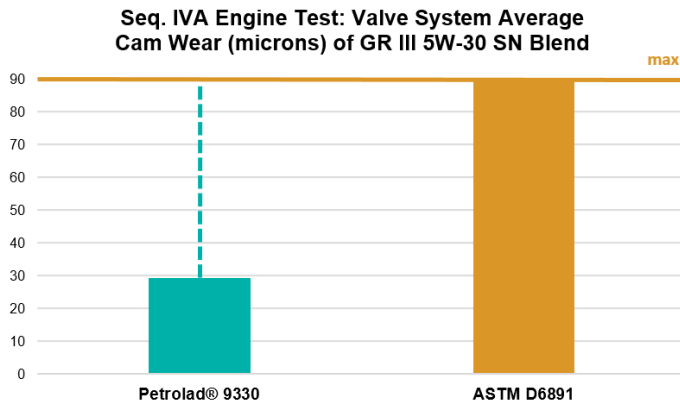
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Note: For both tests above, the blend based on Petrolad® 9330 also included our Viscotech® 595L styrenic VM.

Typical Data

Parameter	Unit	Method	Typical
Appearance	-	Visual	Brown viscous liquid
Colour	-	ASTM D1500	>8
Density @ 15°C	g/cm ³	ASTM D4052	0,994
Kinematic viscosity @ 100°C	cSt	ASTM D445	129,6
Total base number (TBN)	mg KOH/g	ASTM D2896	110
Flash point (PMCC)	°C	ASTM D93	176
Calcium content	% w/w	ASTM D4951	3,04
Phosphorus content	% w/w	ASTM D4951	0,99
Sulphur content	% w/w	ASTM D5453	2,91
Zinc content	% w/w	ASTM D4951	1,06

Handling & Storage

Minimum loading/unloading/pumping temperature	20 °C
Maximum loading/unloading/pumping temperature	75 °C
Maximum blending temperature	65 °C
Maximum storage temperature	75 °C
Maximum long-term* storage temperature	45 °C

*Longer than 2 months.

The abovementioned properties are typical and should not be used as quality control parameters to accept or reject the product. An MSDS is available upon request.

FOR MORE INFORMATION

Please contact

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IMPORTANT NOTICE

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