

Technical Report

Science Road, Norwalk, CT 06852 - (203) 866-5551

Fax: (203) 866-0425 - Email: lad@kingindustries.com



NA-LUBE[®] AW-6330

Extreme Pressure, Antiwear and Elastomer Compatibility

NA-LUBE AW-6330 is an *ashless multifunctional lubricant additive* that imparts excellent extreme pressure and antiwear properties, along with rust and oxidation protection, to functional fluids.

The data below demonstrates improvements in antiwear and EP tests, plus elastomer compatibility, for 1% to 3% additive levels in a Group I oil.

TESTS	No Additive	1.00% AW-6330	2.00% AW-6330	3.00% AW-6330
Base Oil	ISO VG 46 Group I			
Four Ball Wear (ASTM D 4172) 1 hour, Room Temp., 1500 rpm Scar Diameter (mm) @ 15 kgf Scar Diameter (mm) @ 30 kgf	0.64 0.81	0.23 0.42	0.25 0.43	0.30 0.41
Four Ball Weld (ASTM D 2783) 10 seconds, 25°C, 1800 rpm OK Load (kgf) Weld Load (kgf)	40 42	120 130	130 140	140 150
Brugger Test (DIN 51 347) (N/mm ²)	28.5	29.5	31	Not Determined
FZG A/8.3/90 (ASTM D 5182, DIN 51 354 Part 2) Damage Load Stage	6	12	Not Determined	Not Determined
V 104C Vane Pump Test (DIN EN ISO 20 763) Wear Loss Ring (mg) Wear Loss Vanes (mg)	Not Determined	115 4	Not Determined	Not Determined
Seal Compatibility (DIN 53 521/53 538, Part 1) SRE-NBR/7 days/ 100°C Relative Change In Volume (%) Relative Change In Shore A Hardness (%) Change In Elongation At Break (%) Change In Tensile Strength (%)	-2.5 +4.3 -4.3 -14.8	-3.7 +5.5 -6.3 -14.8	-3.7 +6.3 -9.6 -22.4	-5.0 +7.5 -11.5 -26.2

The results shown reflect data generated by King Industries' Technical Service Laboratory. Actual results may vary depending on the additive package, base oil, and test equipment design.

Additional data on **NA-LUBE AW-6330** may be found in the Technical Report "Comparison with Zinc Dialkyldithiophosphates."

(see reverse side)

NA-LUBE® AW-6330 Extreme Pressure, Antiwear and Elastomer Compatibility

For Samples or Technical Service, contact King Industries or your King representative.

King Industries, Inc.
Science Road
Norwalk, CT 06852-0588
Tel: 203-866-5551
Fax: 203-866-0425
E-mail: LAD@kingindustries.com

King Industries International, Inc.
Science Park 402,
1098 XH Amsterdam
The Netherlands
Tel: +31-20-723-1970
E-mail: info@kingintl.nl

NA-LUBE® is a registered trademark of King Industries, Inc.

v:\ad\Technical Literature\TechRpt\NA-LUBEAWAW-6330 EP-AW-Elastomer_02
Revision date: 15 JAN 2015

The conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of product evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. Such testing has not necessarily been done by King Industries, Inc. ("King"). The facts, recommendations and suggestions herein stated are believed to be reliable; however, no guaranty or warranty of their accuracy is made. EXCEPT AS STATED, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE. KING SHALL NOT BE HELD LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES. Any statement inconsistent herewith is not authorized and shall not bind King. Nothing herein shall be construed as a recommendation to use any product(s) in conflict with patents covering any material or its use. No license is implied or granted under the claims of any patent. Sales or use of all products are pursuant to Standard Terms and Conditions stated in King sales documents.