

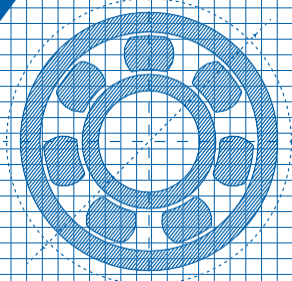


Product Replacement

Rheotemp™ 600 vs. Rheotemp™ 500

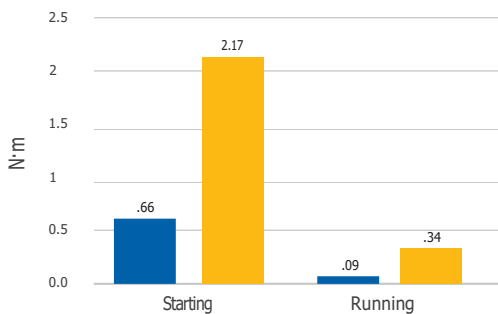
Wide-temperature grease for high speed bearings.

Rheotemp™ 600 is formulated to meet and exceed the operating requirements of our discontinued legacy product, Rheotemp™ 500, providing improved low temperature performance and extended bearing life by offering superior protection against corrosion, fretting, and water washout. Rheotemp™ 600 is intended for high speed bearings exposed to extreme service conditions such as those within aviation, automotive, trucking, and electrical power and utility applications.



LOW TEMPERATURE TORQUE

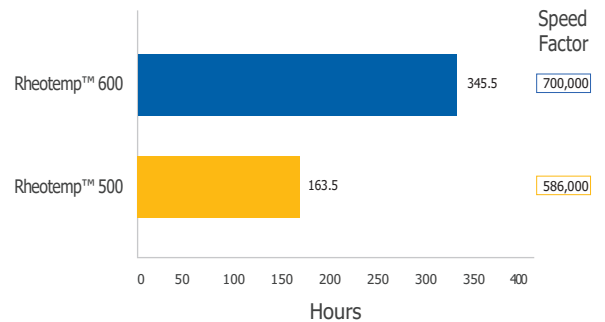
A lubricated bearing is placed in a chamber and run at 1 RPM, at -54°C. The amount of torque generated is recorded after the mechanism starts and after running for 1 hour. (ASTM D-1478)



GRAPH KEY: Rheotemp™ 600 Rheotemp™ 500

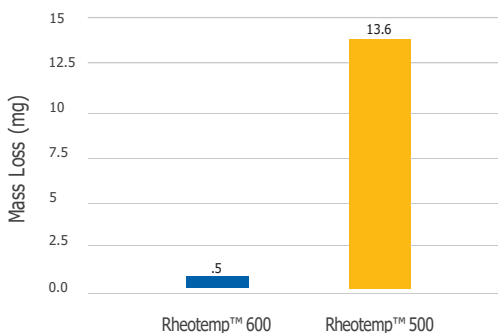
BEARING LIFE (ROF+)

Bearings are rotated at 17,500 RPM at 150°C. Failure occurs when 50% of bearings reach 30°C above the set temperature or the electric motor current draw exceeds 6.4 amps. (NYE CTM)



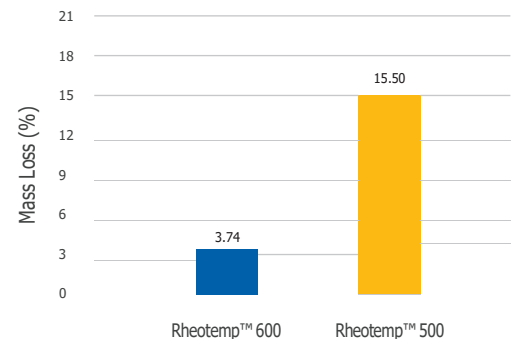
FRETTING WEAR PROTECTION

Evaluates the efficacy of a lubricant to protect bearings from fretting wear. Two ball thrust bearings are oscillated at a frequency of 30Hz under a load of 2450N for 22 hours at room temperature. Fretting wear is determined by measuring the mass loss of the bearing races. (ASTM D-4170)



WATER RESISTANCE

Measures a greases ability to resist water washout. A bearing is rotated at 600 rpm for 1 hour. Water, heated to 41°C, then impinges on the bearing house at a rate of 5mL per second. The lubricated bearing is weighed before and after the test to calculate the percent of grease mass loss. (ASTM D-1264)



ADVANTAGES OF RHEOTEMP™ 600

- Exceptional low-temperature performance
- Improved shear-stability

- Excellent fretting protection
- Great water washout protection

TYPICAL PROPERTIES

Base Oil Properties	Conditions	Rheotemp™ 600	Rheotemp™ 500	Test Method
Chemistry		PAO-Ester / Lithium Complex	Ester / Sodium-Soap	
Temperature Range		-60 to 177°C	-54 to 175°C	
Kinematic Viscosity	40°C	28.9 cSt	48.5 cSt	ASTM D-445
Grease Properties				
Penetration	Unworked	235	230	ASTM D-217
	Worked 60x	287	325	
	Worked 100x	323	>400	
NLGI Grade		1.5	2	ASTM D-217
Oil Separation	30 hrs, 177°C	1.7 wt%	23.1 wt%	ASTM D-6184
Evaporation	22 hrs, 177°C	7.96 wt%	8.0 wt%	ASTM D-2595
Copper Corrosion	24 hrs, 100°C	1a	1a	ASTM D-4048
Water Washout	41°C	3.74%	15.5%	ASTM D-1264
ROF+	150°C, 17500 RPM	345.5	163.5	NYE CTM
PDSC	175°C	No Exotherm	No Exotherm	ASTM D-5483
EMCOR	3% Synthetic Sea Water	0,0	0,2	ASTM D-6138
Fretting Wear	30 Hz, 2450 N, 22 hrs	0.5 mg	13.6 mg	ASTM D-4170

Since 1844: Our performance is reflected in the value we bring to our customers.

Nye Lubricants is a leader in the innovation, formulation and provision of synthetic lubricants, enabling and improving breakthrough products and critical new technologies. We bring proven experience, deep technical knowledge and customer focus to solve our customers' toughest challenges, adding tangible value to products in a wide range of industries and applications.

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