



Iris Industries, Inc. (MFD of Automotive Chemicals)

20 Nami Lane Hamilton, New Jersey 08619

Tel: 609-586-1101 Fax:609-586-1158 Cell: 609-902-5098

Irisincorporated@aol.com

Report to: Potential Customers

Sample of: Iris-911 (DOT-5) Silicone Brake Fluid

Marking: Silicone Brake Fluid QPL-SBF1016 MIL-PRF-46176B

Lot No: 070927

Date: October 1, 2007

RESULTS OF TESTS FOR CONFORMANCE WITH MILITARY SPECIFICATION MIL-PRF-46176B BRAKE FLUID, SILICONE, AUTOMOTIVE ALL WEATHER, OPERATIONAL AND PRESERVATIVE

<u>TESTS</u>	<u>REQUIREMENTS</u>	<u>RESULTS</u>
<u>Vapor Lock Temperature</u>	Min 230°C	Above 232°C
<u>Wet Vapor Lock Temperature</u>	Min 177°C	Above 232°C
<u>High Temperature Stability</u>	Max 5°C change	No Change
<u>Viscosity</u>		
@ -55°C		
Before Humidification	max. 900 cs	555 cs
After Humidification	max 900 cs	563 cs
@ 100°C		
Before Humidification	min. 1.3 cs	14.0 cs
After Humidification	min 1.3 cs	13.9 cs

<u>TESTS</u>	<u>REQUIREMENTS</u>	<u>RESULTS</u>
<u>Corrosion</u>		
Weight Change in mg./sq. cm.		
Tinned iron	max. 0.1	0.00
Steel	max. 0.1	0.00
Aluminum	max. 0.1	0.00
Cast iron	max. 0.1	0.01
Brass	max. 0.2	0.01
Copper	max. 0.2	0.02
Pitting or roughening of strips discernible without magnification	None	None
Gelling of fluid/water, Mixture 25° +/- 5°C	None	None
Crystalline deposit on glass jar walls or on metal strips	None	None
Sedimentation	max. 0.10%	None
Disintegration of rubber cup as evidenced by stickiness, blisters or sloughing	None	None
Decrease in hardness of rubber cups	max. 15 IRHD	2 IRHD
Increase in base diameter of rubber cup	0.03mm to 1.4 mm. or 0.055 in.	0.38 mm

<u>TESTS</u>	<u>REQUIREMENTS</u>	<u>RESULTS</u>
<u>Fluidity And Appearance At Low Temperatures</u>		
@ -55° C		
Stratification or sedimentation, precipitation or crystallization	None	None
Time for air bubble to travel to top	max. 10 seconds	2 second
Appearance @ -55°C	Clear to slightly cloudy	Clear
Appearance of sample after warming to 25 +/- 5°C	Same as before testing	Same
<u>Flash Point</u>	Min 204°C	310°C
<u>Effect on Rubber</u>		
@ 70°C		
<u>SBR</u>		
Volume swell percent	+5 to +20	+7
Base diameter increase	0.15 mm to 1.4 mm	0.38 mm
Hardness change	0 to -10 IRHD	-3 IRHD
Stickiness blisters or sloughing	None	None

<u>TESTS</u>	<u>REQUIREMENTS</u>	<u>RESULTS</u>
<u>Polychloroprene(Neoprene)</u>		
Volume swell percent	-5 to +6	-3
Hardness change	+3 to -10 IRHD	-5 IRHD
Stickiness blisters or sloughing	None	None
<u>EPR</u>		
Volume swell percent	0 to +10	+5
Hardness change	0 to -10 IRHD	-1 IRHD
Stickiness blisters or sloughing	None	None
<u>Natural Rubber</u>		
Volume swell percent	+5 to +20	+6
Base diameter increase	0.15 mm to 1.4 mm	0.68 mm
Hardness change	0 to -10 IRHD	-5 IRHD
Stickiness blisters or sloughing	None	None

<u>TESTS</u>	<u>REQUIREMENTS</u>	<u>RESULTS</u>
<u>@ 100°C</u>		
<u>Polychloroprene(Neoprene)</u>		
Volume swell percent	-5 to +10	-3
Hardness change	+3 to -10 IRHD	-5 IRHD
Stickiness blisters or sloughing	None	None
<u>@ 120°C</u>		
<u>SBR</u>		
Volume swell percent	+5 to +20	+6
Base diameter increase	0.15 mm to 1.4 mm	0.43 mm
Hardness change	0 to -15 IRHD	-3 IRHD
Stickiness blisters or sloughing	None	None
<u>EPR</u>		
Volume swell percent	0 to +10	+4
Hardness change	0 to -10 IRHD	-1 IRHD
Stickiness blisters or sloughing	None	None
<u>Tolerance to High Humidity</u>		
<u>@ -40°C</u>		
Stratification or sedimentation, or crystallization	None	None

<u>TESTS</u>	<u>REQUIREMENTS</u>	<u>RESULTS</u>
Time for air bubble to travel to top	max. 10 seconds	2 second
Cloudiness Appearance at room temperature @ 60°C	Slight Same as before testing	Clear Same as before testing
Stratification	None	None
Sedimentation	Max 0.05%	None
Moisture Level	Max 0.30%	<0.1%
<u>Color</u>	Purple	Purple

Simulated Service Performance (85,000 Strokes, 248 +/- 9°F)

Pitting or Etching of metal parts Discernible without magnification	None	None
Change in initial diameter of any Cylinder or piston	Max 0.005 in	None
Average lip diameter interference set Of rubber cups	Max 65%	32%
Average hardness decrease of rubber Cups	Max 15 IRHD	2 IRHD
Number of rubber cups having a hardness Decrease greater than 17 IRHD	Max 1	None
Operating conditions of rubber cups as Evidence by sticking, scuffing, blistering, Cracking, chipping or change in shape	Satisfactory	Satisfactory

Fluid loss during 24,000 stroke period	Max 36 ml	3.5 ml
Freezing or malfunction of cylinder Pistons	None	None

Iris Industries, Inc.
September 27, 2007
Page 7

TESTS

REQUIREMENTS

RESULTS

Fluid loss during 100 strokes At end of test	Max 36 ml	2.5 ml
---	-----------	--------

DISCUSSION

The sample tested meets the requirements of Military Specification MIL-PRF-46176B dated April 29, 1986 and amended January 10, 2001

Respectfully submitted,

Olga I. Acevedo
Iris Industries, Inc