



EUROPE SEALS BV

Test Report

Material: NBR90

Specification: ASTM D2000 7BG915 B14 EF11 EF21 EO14 EO34 F16 Z1=A14 Heat Aged Resistance Basic Requirements

<u>Original Properties:</u>	<u>Required</u>	<u>Result</u>
Hardness, Shore A, pts	90+/-5	89
Tensile Strength, psi	1500	1940
Elongation, min, %	100	265
A14 <u>Heat Aged: 70 h at 100°C, ASTM D573</u>		
Hardness Change, pts, Shore A	+/-15	+3
Tensile Strength Change, %	+/-30	+2
Elongation Change, %	-50	-26
B14 <u>Compression Set, 22 h at 100°C, ASTM D395 Method B, Deflection 25%, max</u>	25	14
EF11 <u>Fluid Resistance, Fuel A, 70 h at 23°C, ASTM D471</u>		
Hardness Change, pts, Shore A	+/-10	-1
Tensile Strength Change, %	-25	-9
Elongation Change, %	-25	-11
Volume Change, %	-5 ~ +10	+2
EF21 <u>Fluid Resistance, Fuel B, 70 h at 23°C, ASTM D471</u>		
Hardness Change, pts, Shore A	0 ~ -30	-11
Tensile Strength Change, %	-60	-37
Elongation Change, %	-60	-41
Volume Change, %	0 ~ +40	+26
EO14 <u>Fluid Resistance, ASTM #1 Oil, 70 h at 100°C, ASTM D471</u>		
Hardness Change, pts	-5 ~ +5	+3
Tensile Strength Change, %	-25	+15
Elongation Change, %	-45	-20
Volume Change, %	-10 ~ +5	-6.7

Fluid Resistance, ASTM #3 Oil, 70 h at 100°C, ASTM D471

EO34

Hardness Change, pts, Shore A	-10 to +5	-9
Tensile Strength Change, %	-45	-13
Elongation Change, %	-45	-15
Volume Change, %	0 to +25	+8.1

F16 Low Temperature Resistance, ASTM D2137, Method A, 9.3.2
nonbrittle after 3 min at -35°C

Pass Pass

* This test result is based on the test slabs and test buttons. The actual parts will be different with the above test results.

2005-1-3/gf