



O-Ring Division
2360 Palumbo Drive
Lexington, KY 40512
(859) 269-2351

COMPOUND: VW263-75 (Low-temperature FKM for Biodiesel)
SPECIFICATION: ASTM D2000 M2HK707Z1Z2Z3Z4Z5
DATE: February 21, 2008

Original Physical Properties

	<u>Specification</u>	<u>Results</u>
Hardness, Shore A Points (D2240) Z1	75±5	77
Tensile, MPa min (D412)	7.0	10.9
Elongation, % min (D412)	175	248
Color Z2	Brown	Brown

Heat Resistance: D573

70 hrs @ 250°C

Hardness Change	+10 max	+2
Tensile Strength Change %	-25 max	+24
Elongation Change %	-25 max	-15

Compression Set: D395B, Z3

70 hrs @ 200°C

Set%	40 max	26
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IRM 903 Oil: D471

70 hrs @ 150°C

Volume Change %	+10 max	+1
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Diesel Fuel Resistance: D471, Z4

1000 hrs. @ 125 °C, Refresh fuel every 168 hrs.

Ultra Low Sulfur Diesel (15ppm sulfur)		
Hardness Change, points	±10	-1
Tensile Change, %	-25 max	-5
Elongation Change, %	-40 max	-30
Volume Change, %	+10 max	+5
Compression Set, % (3.53mm c/s o-ring)	50 max	27
Surface Condition, 180° Bend	No Cracks No Blisters	Pass

B100 (100% RME Biodiesel)

Hardness Change, points	±10	-4
Tensile Change, %	-25 max	-5
Elongation Change, %	-40 max	-25
Volume Change, %	+10 max	+7
Compression Set, % (3.53mm c/s o-ring)	50 max	36
Surface Condition, 180° Bend	No Cracks, No Blisters	Pass



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B20 (20% RME Biodiesel / 80% ULSD)

Hardness Change, points	±10	-2
Tensile Change, %	-25 max	+2
Elongation Change, %	-40 max	-23
Volume Change, %	+10 max	+5
Compression Set, % (3.53mm c/s o-ring)	50 max	32
Surface Condition, 180° Bend	No Cracks No Blisters	Pass

Specification

Results

Low-Temperature Resistance: D1329 Z5

Temperature of Retraction, TR-10, °C	-25 or colder	-31
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Z1 = Original Durometer, 75±5 Shore A points

Z2 = Color, Brown

Z3 = Compression Set (D395B), 70 hrs. @ 200 °C, 40% max.

Z4 = Diesel Fuel Resistance (D471), 1000 hrs. @ 125 °C with fuel changes every 168 hrs.

Ultra Low Sulfur Diesel (15 ppm Sulfur), B20 (20%RME Biodiesel / 80% ULSD) , and B100 (100% RME Biodiesel)

Hardness Change, pts.	±10
Tensile Change, %	-25 max
Elongation Change, %	-40 max
Volume Change, %	+10 max
Compression Set, % (3.53 mm c/s o-ring)	50 max
Surface Condition, 180° Bend	No Cracks, Blisters

Z5 = Low Temperature Resistance (D1329), Temperature of Retraction, Tr-10 -25 °C or colder