



ESP International  
5920 Dry Creek Ln NE  
Cedar Rapids, IA 52402  
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# V8028

Revision: A

**CONTACT US**

**MATERIAL:** FKM  
**COMPOUND:** V8028  
**SPECIFICATION:** ASTM D 2000 M2HK710 A1-10 B38 EF31 EO78 Z1 Z2  
**COLOR:** Brown  
**CERTIFICATIONS:** FDA CFR 21 177.2600, 3A Sanitary Standard 18 Class I  
**ADDITIONAL NOTES:** -

<b>Spec</b>	<b><u>Original Physical and Mechanical Properties</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
<b>Z1</b>	Hardness, Shore A Pts, ASTM D 2240	75±5	74
	Tensile Strength, MPa (psi) min., ASTM D 412	10.0 (1450)	11.5 (1667)
	Ultimate Elongation, % min., ASTM D412	175	212
	Modulus @ 100%, MPa (psi), ASTM D 412	-	5.9 (859)
	Density, (Mg/m <sup>3</sup> )	-	2.13
<b>A1-10</b>	<b><u>Heat Resistance (ASTM D 573) 70 h @ 250°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts max.	10	4
	Change in Tensile, % max.	-25	-5
	Change in Elongation, % max.	-25	-24
	Change in Weight, % max.	-	-3
<b>B38</b>	<b><u>Compression Set (ASTM D 395, Method B) 22 h @ 200°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	% of Original Deflection, max.	50	14.2
<b>EF31</b>	<b><u>Fluid Resistance (ASTM D 471) 70 h in ASTM Fuel C @ 23°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±5	-4
	Change in Tensile, % max.	-25	-16
	Change in Elongation, % max.	-20	-18
	Change in Volume, %	0~+10	4.2

Note: the values listed above are only valid for material samples prepared for laboratory test purposes as documented in the standards listed above



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<b>EO78</b>	<b><u>Fluid Resistance (ASTM D 471) 70 h in Liquid No. 101 @ 200°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	-15~+5	-12
	Change in Tensile, % max.	-40	-25
	Change in Elongation, % max,	-20	-14
	Change in Volume, %	0~+15	14.1
<b>Z2 (EO88)</b>	<b><u>Fluid Resistance (ASTM D 471) 70 h in Fluid No. 2, Blend 7700 @ 200°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	-15~+5	-13
	Change in Tensile, % max.	-40	-37
	Change in Elongation, % max.	-20	-18
	Change in Volume, % max.	25	24.3
<b>C2.1.1</b>	<b><u>Low Fat Tolerance Absorption (ASTM D 471) 22 h @ 70°C C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±6	-3
	Change in Tensile, %	-	-22
	Change in Elongation, %	-	8
	Change in Weight, %	±5	0.5
	Change in Volume, %	±5	0.1
	Change in Visual Appearance	-	Pass
<b>C2.2.1</b>	<b><u>Milk Fat Absorption (ASTM D 471) 22 h @ 70°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±5	-1
	Change in Tensile, %		-22
	Change in Elongation, %	-	7
	Change in Weight, %	±5	0.4
	Change in Volume, %	±5	0.4
	Change in Visual Appearance	-	Pass

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<b>C2.2.2</b>	<b><u>Distilled Water Absorption (ASTM D 471) 22 h @ 70°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±5	-2
	Change in Tensile, %	-	-20
	Change in Elongation, %	-	7
	Change in Weight, %	±5	0.5
	Change in Volume, %	±5	0.5
	Change in Visual Appearance	-	Pass
<b>C2.2.3</b>	<b><u>Air Aging Stability (ASTM D 573) 166 h @ 100°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±10	-1
	Change in Tensile, %	-	10
	Change in Elongation, %	-	-17
	Change in Weight, %	-	0.1
	Change in Volume, %	-	0.1
	Change in Visual Appearance	-	Pass
<b>D4.6</b>	<b><u>Fluid Resistance (ASTM D471) 22 h in Nitric Acid @ 82°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±5	-2
	Change in Tensile, %	-	-17
	Change in Elongation, %	-	14
	Change in Weight, %	±5	1.3
	Change in Volume, %	±5	2.4
	Change in Visual Appearance	-	Pass
<b>D4.7</b>	<b><u>Fluid Resistance (ASTM D471) 22 h in Phosphoric Acid @ 82°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	-	-1
	Change in Tensile, %	-	-21
	Change in Elongation, %	-	8
	Change in Weight, %	-	0.5
	Change in Volume, %	-	0.9
	Change in Visual Appearance	-	Pass

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<b>D4.8</b>	<b><u>Fluid Resistance (ASTM D471) 22 h in Alkaline Cleaner @ 82°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±5	-2
	Change in Tensile, %	-	-23
	Change in Elongation, %	-	4
	Change in Weight, %	±5	0.5
	Change in Volume, %	±5	0
	Change in Visual Appearance	-	Pass
<b>D4.9</b>	<b><u>Fluid Resistance (ASTM D 471) 22 h in Chlorine Sanitizer @ 21°C</u></b>	<b><u>Requirements</u></b>	<b><u>Result</u></b>
	Change in Hardness, Pts	±5	-1
	Change in Tensile, %	-	-4
	Change in Elongation, %	-	1
	Change in Weight, %	±5	0.2
	Change in Volume, %	±5	-0.3
	Change in Visual Appearance	-	Pass

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