

## BLUE-GARD® Style 3300

### MATERIAL PROPERTIES\*:

<b>Color:</b>	Black
<b>Composition:</b>	Aramid fibers with a neoprene binder
<b>Fluid Services</b> (see chemical resistance guide):	Water, saturated steam <sup>3</sup> , refrigerants, oils and fuels
<b>Temperature<sup>1</sup>, °F (°C)</b>	
Minimum:	-100 (-73)
Continuous Max:	+400 (+205)
Maximum:	+700 (+371)
<b>Pressure<sup>1</sup>, psig (bar):</b>	
Maximum:	1200 (83)
Minimum:	Full Vacuum
Ideal Operating Limit:	750 (52)
<b>P x T (max.)<sup>1</sup>, psig x °F (bar x °C):</b>	
1/32 and 1/16":	350,000 (12,000)
1/8"	250,000 (8,600)

### TYPICAL PHYSICAL PROPERTIES\*:

<b>ASTM F36</b>	<b>Compressibility, average, %:</b>	10	
<b>ASTM F36</b>	<b>Recovery, %:</b>	55	
<b>ASTM F38</b>	<b>Creep Relaxation, %:</b>	20	
<b>ASTM F152</b>	<b>Tensile, Across Grain, psi (N/mm<sup>2</sup>):</b>	1800 (12.4)	
<b>ASTM F1315</b>	<b>Density, lbs./ft.<sup>3</sup> (grams/cm<sup>3</sup>):</b>	110 (1.76)	
<b>ASTM F433</b>	<b>Thermal Conductivity (K), W/m<sup>2</sup>K (Btu.in./hr.ft.<sup>2</sup>.°F):</b>	0.29-0.38 (2.00-2.65)	
<b>ASTM D149</b>	<b>Dielectric Properties, range, volts/mil.</b>		
	Sample conditioning	<u>1/16"</u>	<u>1/8"</u>
	3 hours at 250°F	392 <sup>(2)</sup> -517	269 <sup>(2)</sup>
	96 hours at 100% Relative Humidity:	78	73
<b>ASTM F586</b>	<b>Design Factors</b>	<u>1/16" &amp; Under</u>	<u>1/8"</u>
	"m" factor:	2.1	4.0
	"y" factor, psi (N/mm <sup>2</sup> ):	3050 (21.0)	3500 (24.1)

### SEALING CHARACTERISTICS\*

	ASTM F37B – Fuel A	ASTM F37B - Nitrogen	DIN 3535 – Nitrogen
<b>Gasket Load</b> , psi (N/mm <sup>2</sup> ):	500 (3.5)	3000 (20.7)	4640 (32)
<b>Internal Pressure</b> , psig (bar):	9.8 (0.7)	30 (2)	580 (40)
<b>Leakage</b>	<b>0.2 ml/hr.</b>	<b>0.5 ml/hr.</b>	<b>0.05 cc/min</b>

#### Notes:

\* This is a general guide and should not be the sole means of selecting or rejecting this material. ASTM test results in accordance with ASTM F-104; properties

<sup>1</sup> Based on ANSI RF flanges at our preferred torque. When approaching maximum pressure, continuous operating temperature, minimum temperature or 50% of maximum P x T, consult Garlock Applications Engineering. Minimum temperature rating is conservative.

<sup>2</sup> Indicates electric current arced around and not through the gasket. Dielectric strength is higher than indicated.

<sup>3</sup> These styles are not preferred choices for steam service, but are successful when adequately compressed Minimum recommended assembly stress = 4,800psi. Preferred assembly stress = 6,000-10,000psi. Gasket thickness of 1/16" strongly preferred. Retorque the bolts/studs prior to pressurizing the assembly. For saturated steam above 150psig or superheated steam, consult Garlock Engineering.

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