

## GRAPH-LOCK® Style 3125SS

### MATERIAL PROPERTIES\*:

<b>Color:</b>	Black
<b>Composition:</b>	Graphite with a 0.002" 316SS foil insert -Laminated layers of 0.015" purified natural graphite flake that have been acid washed, expanded under heat, and then compressed into sheets with a minimum graphite content of 98%. This sheet contains a 0.002" thick 316 stainless steel foil insert, bonded with a proprietary adhesive. This adhesive comprises less than 1% of the total laminated weight.

### Temperature<sup>1</sup>, °F (°C)

Minimum:	-450 (-268)
Continuous Max:	+850 (+454)

### Pressure<sup>1</sup>, psig (bar):

Maximum:	2000 (138)
Minimum:	Full Vacuum
Ideal Operating Limit:	750 (52)

### P x T (max.)<sup>1</sup>, psig x °F (bar x °C):

1/32 and 1/16":	700,000 (25,000)
1/8"	350,000 (12,000)

**Meets Specifications:** ABS (American Bureau of Shipping), Fire Safe and MIL-DTL-24696 Type I<sup>(3)</sup>

### TYPICAL PHYSICAL PROPERTIES\*:

<b>ASTM F36</b>	<b>Compressibility, average, %:</b>	43
<b>ASTM F36</b>	<b>Recovery, %:</b>	14
<b>ASTM F38</b>	<b>Creep Relaxation, %:</b>	15
<b>ASTM F152</b>	<b>Tensile, Across Grain, psi (N/mm<sup>2</sup>):</b>	4000 (27)
<b>DIN 52913</b>	<b>Load Retention, %:</b>	90
<b>ASTM F1315</b>	<b>Density, lbs./ft.<sup>3</sup> (grams/cm<sup>3</sup>):</b>	70 (1.12)
<b>ASTM F586</b>	<b>Design Factors</b>	<u>1/16"</u> <u>1/8"</u>
	"m" factor:	6.5 11.8 <sup>(2)</sup>
	"y" factor, psi (N/mm <sup>2</sup> ):	3300 (22.8) 5900 (40.7)
<b>ROTT</b>	<b>Gasket Constants, 1/16":</b>	Gb=816 a=0.377 Gs=0.066

### SEALING CHARACTERISTICS\*

	ASTM F37B – Fuel A	ASTM F37B - Nitrogen	DIN 3535 – Nitrogen
<b>Gasket Load, psi (N/mm<sup>2</sup>):</b>	500 (3.5)	3000 (20.7)	4640 (32)
<b>Internal Pressure, psig (bar):</b>	9.8 (0.7)	30 (2)	580 (40)
<b>Leakage</b>	<b>1.0 ml/hr.</b>	<b>1.5 ml/hr.</b>	<b>1.5 cc/min</b>

### CHEMICAL IMPURITY DATA

Chemical Limits			
Leachable Levels Max., ppm	ppm	Total Chemical Limits, Max., ppm	ppm
<b>Chlorides:</b>	100	<b>Total Chlorides:</b>	500
		<b>Total Fluorides:</b>	300
		<b>Total Sulfur:</b>	1000

#### 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> This "m" value, based on ambient temperature leakage with nitrogen, is high. Field experience has shown that lower values would be workable in elevated temperatures. Consult Applications Engineering.

<sup>3</sup> To ensure receipt of product branded Mil-DTL-24696, certification will be required - - fees associated based on quantity.

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