

## Garlock GRAPH-LOCK® 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.
<b>Temperature<sup>2</sup>, °F (°C)</b>	
Minimum:	-400 (-240)
Continuous Max:	+850 (+454)
<b>Pressure<sup>2</sup>, Maximum, psig (bar):</b>	2000 (138)
<b>P x T (max.)<sup>2</sup>, psig x °F (bar x °C):</b>	
1/32 and 1/16":	700,000 (25,000)
1/8"	350,000 (12,000)
<b>Meets Specification:</b>	ABS (American Bureau of Shipping), Fire Safe and MIL-DTL-24696 Type I <sup>5</sup>

### TYPICAL PHYSICAL PROPERTIES\*:

<b>ASTM F36</b>	<b>Compressibility</b> , range, %:	43		
<b>ASTM F36</b>	<b>Recovery</b> , %:	14		
<b>ASTM F38</b>	<b>Creep Relaxation</b> , %:	15		
<b>ASTM F152</b>	<b>Tensile</b> , Across Grain, psi (N/mm <sup>2</sup> ):	4000 (27)		
<b>DIN 52913</b>	<b>Stability Under Stress</b> , %:	90		
<b>ASTM F1315</b>	<b>Density</b> , lbs.ft. <sup>3</sup> (grams/cm <sup>3</sup> ):	70 (1.12)		
<b>ASTM D586</b>	<b>Design Factors</b>	<u>1/16"</u>		<u>1/8"</u>
	"m" factor:	6.5		11.8 <sup>(4)</sup>
	"y" factor, psi (N/mm <sup>2</sup> )	3300 (22.8)		5900 (40.7)
<b>ROTT</b>	<b>Gasket constants</b> , 1/16"	Gb=816	a=0.377	Gs=0.066
<b>ASTM F104</b>	<b>Line Call Out:</b>	F527000B4M5		

### SEALING CHARACTERISTICS\*

	<b>ASTM F37B Fuel A</b>	<b>ASTM F37B Nitrogen</b>	<b>DIN 3535-4 Gas Permeability</b>
<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>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		Total Chemical Limits, Max., ppm	
Chlorides:	100	Total Chlorides	500
		Total Fluorides	300
		Total Sulfur:	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 based on 1/32" (0.8mm) sheet thickness unless otherwise mentioned.

\* Values do not constitute specification Limits

<sup>2</sup> Based on ANSI RF flanges at our preferred torque. When approaching maximum pressure, continuous operating temperature, minimum temperature or 50% of maximum P<sub>xT</sub>, consult Garlock Applications Engineering.

<sup>3</sup> Maximum temperature of +1000°F (+540°C) for GRAPH-LOCK HT.

<sup>4</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>5</sup> To ensure receipt of product branded Mil-DTL-24696, certification will be required - fees associated based on quantity. Refer to "Military Specifications" in the Gasketing Terms section of the Engineered Gasket Products catalog for order/inquiry requirements.