

GRAPH-LOCK® Style 3125SS

MATERIAL PROPERTIES*:

Color:	Black
Composition:	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.

Temperature¹, °F (°C)

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

Pressure¹, psig (bar):

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

P x T (max.)¹, 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⁽³⁾

TYPICAL PHYSICAL PROPERTIES*:

ASTM F36	Compressibility, average, %:	43		
ASTM F36	Recovery, %:	14		
ASTM F38	Creep Relaxation, %:	15		
ASTM F152	Tensile, Across Grain, psi (N/mm²):	4000 (27)		
DIN 52913	Load Retention, %:	90		
ASTM F1315	Density, lbs./ft.³ (grams/cm³):	70 (1.12)		
ASTM F586	Design Factors	<u>1/16"</u>	<u>1/8"</u>	
	"m" factor:	6.5	11.8 ⁽²⁾	
	"y" factor, psi (N/mm ²):	3300 (22.8)	5900 (40.7)	
ROTT	Gasket Constants, 1/16":	Gb=816	a=0.377	Gs=0.066

SEALING CHARACTERISTICS*

	ASTM F37B – Fuel A	ASTM F37B - Nitrogen	DIN 3535 – Nitrogen
Gasket Load, psi (N/mm²):	500 (3.5)	3000 (20.7)	4640 (32)
Internal Pressure, psig (bar):	9.8 (0.7)	30 (2)	580 (40)
Leakage	1.0 ml/hr.	1.5 ml/hr.	1.5 cc/min

CHEMICAL IMPURITY DATA

Chemical Limits			
Leachable Levels Max., ppm	ppm	Total Chemical Limits, Max., ppm	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

¹ 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.

² 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.

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

REV: 08/16/2024