

GRAPH-LOCK® Style 3125TC

MATERIAL PROPERTIES*:

Color:	Black
Composition:	Graphite with a 316SS tang insert Purified natural graphite flake that have been acid washed, expanded under heat, and then compressed into sheets with a min. graphite content of 98%. The graphite is mechanically bonded to a 0.004" thick 316 stainless steel tang insert (53 tangs/sq in.). Product contains corrosion inhibitor.
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), and Fire Safe

TYPICAL PHYSICAL PROPERTIES*:

ASTM F36	Compressibility , average, %:	40
ASTM F36	Recovery , %:	15
ASTM F38	Creep Relaxation , %:	10
ASTM F152	Tensile, Across Grain, psi (N/mm²):	3500 (24)
DIN 52913	Load Retention , %:	90
ASTM F1315	Density, lbs./ft.³ (grams/cm³):	70 (1.12)
ASTM F586	Design Factors	1/16" 1/8"
	"m" factor:	2.6 6.0
	"y" factor, psi (N/mm ²):	2500 (17.2) 3000 (20.7)
ROTT	Gasket Constants, 1/16":	Gb=1400 a=0.324 Gs=0.01

SEALING CHARACTERISTICS*

	ASTM F37B – Fuel A	ASTM F37B - Nitrogen	DIN 3535 – Nitrogen
Gasket Load , psi (N/mm ²):	500 (3.5)	3000 (20.7)	4640 (32)
Internal Pressure , psig (bar):	9.8 (0.7)	30 (2)	580 (40)
Leakage	2.0 ml/hr.	1.5 ml/hr.	1.0 cc/min

CHEMICAL IMPURITY DATA

Chemical Limits			
Leachable Levels Max., ppm	ppm	Total Chemical Limits, Max., ppm	ppm
Chlorides:	<50	Total Chlorides:	200
Fluorides:	100	Total Sulfur:	1400
Sulfur:	200		

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 PxT, consult Garlock Applications Engineering. Minimum temperature rating is conservative.

REV: 08/16/2024