

Style 9900

MATERIAL PROPERTIES*:

Color:	Mahogany
Composition:	Graphite fibers with a nitrile binder
Fluid Services (see chemical resistance guide):	Saturated steam ² , water, oils, inert gases, aliphatic hydrocarbons & gasoline
Temperature¹, °F (°C)	
Minimum:	-100 (-75)
Continuous Max:	+650 (+343)
Maximum:	+1000 (+537)
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), STR 508 Rev. 5 ⁽³⁾ and Fire Safe

TYPICAL PHYSICAL PROPERTIES*:

ASTM F36	Compressibility , average, %:	9	
ASTM F36	Recovery , %:	55	
ASTM F38	Creep Relaxation , %:	9	
ASTM F152	Tensile , Across Grain, psi (N/mm ²):	1800 (12)	
ASTM F1315	Density , lbs./ft. ³ (grams/cm ³):	110 (1.76)	
ASTM F433	Thermal Conductivity (K) , W/m ² K (Btu·in./hr·ft. ² ·°F):	0.87 (6.0)	
ASTM D149	Dielectric Properties , range, volts/mil.		
	Sample conditioning	<u>1/16"</u>	<u>1/8"</u>
	3 hours at 250°F	<2	-
	96 hours at 100% Relative Humidity:	-	-
ASTM F586	Design Factors	<u>1/16" & Under</u>	<u>1/8"</u>
	"m" factor:	4.5	5
	"y" factor, psi (N/mm ²):	4100 (28.3)	4100 (28.3)
ROTT	Gasket Constants , 1/16":	Gb=2,322	a=0.133 Gs=18.0

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	0.3 ml/hr.	0.6 ml/hr.	0.015 cc/min

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.

² 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.

³ Testing and certification is required in order to claim STR 508 compliance.

REV: 1/28/2025