

Technical Data Sheet

MATERIAL PROPERTIES*:

Garlock 9900
 Colour: Mahogany
 Composition: Carbon Fibres with a NBR binder
 Fluid Services: (See Chem. Res. Guide) Saturated steam², water, oils, inert gases, aliphatic hydrocarbons & gasoline



Temperature¹, °F (°C)

Minimum: -100 (-75)
 Continuous Maximum: +650 (+343)
 Maximum: +1000 (+537)

Pressure¹, Maximum, psig (bar): 2000 (138)

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(5) Rev. 2 and Fire Safe

TYPICAL PHYSICAL PROPERTIES*:

ASTM F36	Compressibility, average, %:		9
ASTM F36	Recovery, %:		55
ASTM F38	Creep Relaxation, %:		9
ASTM D1708	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	1/16"	1/8"
	3 hours at 250° F	<2	-
	96 hours at 100% Relative Humidity:	-	-
ASTM F586	Design Factors	1/16" & Under	1/8"
	"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

	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	0.30 ml/hr.	0.6 ml/hr	0.015 cc/Min

SEALING CHARACTERISTICS*

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 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 150psi or superheated steam, consult us.

Asbestos Free



Certificate Number: 14352
ISO 9001



Care should be taken in selecting the most suitable quality for each application. Advice is available, but final responsibility remains with the customer.

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