

Style 9920

MATERIAL PROPERTIES*:

Color:	Mahogany
Composition:	Carbon fibers with a nitrile binder
Fluid Services (see chemical resistance guide):	Saturated steam ² , water, oil, inert gases, aliphatic hydrocarbons & gasoline
Temperature¹, °F (°C)	
Minimum:	-100 (-75)
Continuous Max:	+650 (+343)
Maximum:	+1000 (+537)
Pressure¹, Maximum, psig (bar):	2000 (70)
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)

TYPICAL PHYSICAL PROPERTIES*:

ASTM F36	Compressibility , range, %:	7-17
ASTM F36	Recovery , %:	40
ASTM F38	Creep Relaxation , %:	20
ASTM F152	Tensile , Across Grain, psi (N/mm ²):	1000 (7)
ASTM F1315	Density , lbs./ft. ³ (grams/cm ³):	90 (1.440)

CHEMICAL IMPURITY DATA^{(4)*}

Total Heavy Metals					
Antimony, Max., ppm:	100	Arsenic, Max., ppm:	100	Bismuth, Max., ppm:	100
Cadmium, Max., ppm:	100	Copper, Max., ppm:	100	Gallium, Max., ppm:	100
Indium, Max., ppm:	100	Lead, Max., ppm:	100	Mercury, Max., ppm:	100
Tin, Max., ppm:	100	Zinc ⁽³⁾ , Max., ppm:	10,000	Silver, Max., ppm:	100
Leachable Levels					
Chlorides, Max., ppm:	200	Fluorides, Max., ppm:	100	Sulfur, Max., ppm:	1600

IMMERSION PROPERTIES*- ASTM F146 Fluid Resistance after Five Hours

	ASTM #901 Oil 300°F (150°C)	ASTM #903 Oil 300°F (150°C)	ASTM Fuel A 70-85°F (20-30°C)	ASTM Fuel B 70-85°F (20-30°C)
Thickness Increase, (%)	0-10	0-15	0-10	0-20
Weight Increase, (%)	<15	-	<15	<20
Tensile Loss (%)	-	<60	-	-

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 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 This material shows a high level of zinc in the form of zinc oxide.

⁴ The chemical impurity data and physical test results, certification to both 10CFR.50 Appendix B and 10CFR.21, will always be included with the product.