



Garlock 2900/2950

MATERIAL PROPERTIES*

Color:	2900 Black, 2950 Green
Composition:	Aramid fibers with a nitrile binder
Fluid Services¹:	Water, aliphatic hydrocarbons, oils and gasoline
Temperature², °F (°C)	
Minimum:	-100 (-75)
Continuous Max:	+400 (+205)
Maximum:	+700 (+371)
Pressure², Maximum, psig (bar):	1000 (70)
P x T (max.)², psig x °F (bar x °C)	
1/32 and 1/16":	350,000 (12,000)
1/8":	250,000 (8,600)

TYPICAL PHYSICAL PROPERTIES*

ASTM F36	Compressibility , range, %:	7-17
ASTM F36	Recovery , %:	50
ASTM F38	Creep Relaxation , %:	25
ASTM F152	Tensile , Across Grain, psi (N/mm ²):	1500 (10)
ASTM F1315	Density , lbs./ft. ³ (grams/cm ³):	105 (1.68)
ASTM F433	Thermal Conductivity (K) , W/m ² ·K (Btu·in./hr·ft. ² ·°F):	0.29-0.38 (2.00-2.65)
ASTM D149	Dielectric Properties , range, volts/mil.	
	Sample conditioning	1/16" 1/8"
	3 hours at 250°F:	342 ⁽³⁾ 254 ⁽³⁾
	96 hours at 100% Relative Humidity:	26 28
ASTM F586	Design Factors	1/16" & Under 1/8"
	"m" factor:	4.5 ⁽⁴⁾ 7.0 ⁽⁴⁾
	"y" factor, psi (N/mm ²):	3000 ⁽⁴⁾ (20.7) 4000 ⁽⁴⁾ (27.6)
ASTM F104	Line Call Out:	F712102A9B5E33K5L101M5

SEALING CHARACTERISTICS*

	ASTM F37B Fuel A	ASTM F37B Nitrogen
Gasket Load , psi (N/mm ²):	500 (3.5)	3000 (20.7)
Internal Pressure , psig (bar):	9.8 (0.7)	30 (2)
Leakage	0.6 ml/hr.	1.2 ml/hr.

IMMERSION PROPERTIES* - ASTM F146 Fluid Resistance after Five Hours

	ASTM #1 Oil 300°F (150°C)	ASTM IRM #903 300°F (150°C)	ASTM Fuel A 70-85°F (20-30°C)	ASTM Fuel B 70-85°F (20-30°C)
Thickness Increase, (%)	0-5	0-15	0-5	0-10
Weight Increase, (%)	0-10	-	0-10	0-20
Tensile Loss, (%)	-	0-35	-	-

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 based on 1/32" (0.8mm) sheet thickness unless otherwise mentioned.

* Values do not constitute specification Limits

¹ See Garlock chemical resistance guide.

² 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.

³ Indicates current arced around and not through gasket. Dielectric higher than indicated unless otherwise mentioned.

⁴ These values are from style 2950. Style 2900 has higher values.

⁵ A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm²), Pressure = 9.8psig (0.7bar): Typical = 0.25ml/hr, Max = 1.5ml/hr. A9: Leakage in Nitrogen, Gasket Load = 3,000psi (20.7N/mm²), Pressure = 30psig (2bar): Typical = 1.0ml/hr, Max = 2.5ml/hr.