Garlock BLUE-GARD® 3700

MATERIAL PROPERTIES*

Color:	Light grey
Composition:	Aramid fibers with a EPDM binder
Fluid Services[1]:	Water, saturated steam[4], and mild chemicals
Temperature[2], °F (°C)	
Minimum:	-100 (-73)
Continuous Max:	+400 (+205)
Maximum:	+700 (+371)
Pressure[2], Maximum, psig (bar):	1200 (83)
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**, %:	40	
ASTM F38	**Creep Relaxation**, %:	25	
ASTM F152	**Tensile**, Across Grain, psi (N/mm^2):	2500 (17)	
ASTM F1315	**Density**, lbs./ft.^{3} (grams/cm^3):	100 (1.60)	
ASTM F433	**Thermal Conductivity (K)**, W/m°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:	451[3]-620	291[3]
	96 hours at 100% Relative Humidity:	134	71
ASTM F586	**Design Factors**	1/16" & Under	1/8"
	"m" factor:	3.5	6.7
	"y" factor, psi (N/mm^2):	2800 (19.3)	4200 (28.9)
ROTT	**Gasket Constants**, 1/8":	Gb=1,318 a=0.258	Gs=0.60
ASTM F104	**Line Call Out**:	F712902A9B4E99K5L104M9[5]	

SEALING CHARACTERISTICS*

	ASTM F37B Fuel A	ASTM F37B Nitrogen	DIN 3535- 4 Gas Permeability
Gasket Load, psi (N/mm2):	500 (3.5)	3000 (20.7)	4640 (32)
Internal Pressure, psig (bar):	9.8 (0.7)	30 (2)	580 (40)
Leakage	**0.1 ml/hr.**	**0.7 ml/hr.**	**0.04 cc/min**

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, (%)	20-35	60-100	10-40	20-50
Weight Increase, (%)	-	-	-	-
Tensile Loss, (%)	-	-	-	-

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

[3] Indicates current arced around and not through gasket. Dielectric higher than indicated.

[4] These styles are not preferred choices for steam service, but are successful when adequately compressed. 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 Hanna Rubber Company.

[5] Fourth numeral 9: % Thickness Increase in IRM Oil #903 = 60-100% max. A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm2), Pressure = 9.8psig (0.7bar): Typical = 0.1ml/hr, Max = 1.0ml/hr. A9: Leakage in Nitrogen, Gasket Load = 3,000psi (20.7N/mm2), Pressure = 30psig (2bar): Typical = 0.7ml/hr, Max = 2.0ml/hr. E99: % Increase in ASTM Fuel B: Weight: 100% max., Thickness: 20-50% max. M9: Tensile Strength = 2,250psi min. (15N/mm^2 min.).