Garlock
SEALING TECHNOLOGIES®
an EnPro Industries company

Garlock 706

MATERIAL PROPERTIES*

Color:	White
Composition:	Inorganic fibers with a nitrile binder
Fluid Services[1]:	Saturated and superheated steam[3]
Temperature[2], °F (°C)	
Minimum:	-100 (-73)
Continuous Max:	+750 (+399)
Maximum:	+1000 (+538)
Pressure[2], Maximum, psig (bar):	1500 (104)
P x T (max.)[2], psig x °F (bar x °C)	
1/32 and 1/16":	700,000 (25,000)
1/8":	500,000 (18,500)
Meets Specification:	ABS (American Bureau of Shipping) and Fire Safe

TYPICAL PHYSICAL PROPERTIES*

ASTM F36	**Compressibility**, range, %:	7-17	
ASTM F36	**Recovery**, %:	50	
ASTM F38	**Creep Relaxation**, %:	18	
ASTM F152	**Tensile**, Across Grain, psi (N/mm^2):	1400 (9)	
ASTM F1315	**Density**, lbs./ft.^{3} (grams/cm^3):	105 (1.68)	
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:	133	142
	96 hours at 100% Relative Humidity:	25	25
ASTM F586	**Design Factors**	1/16" & Under	1/8"
	"m" factor:	11.4[4]	22[4]
	"y" factor, psi (N/mm^2):	4800 (33.1)	6500 (44.8)
ROTT	**Gasket Constants**, 1/16":	Gb=2,455	a=0.267 Gs=0.622
ASTM F104	**Line Call Out**:	F712102A9B4E34K5L501M9[5]	

SEALING CHARACTERISTICS*

	ASTM F37B Fuel A	ASTM F37B Nitrogen
Gasket Load, psi (N/mm2):	500 (3.5)	3000 (20.7)
Internal Pressure, psig (bar):	9.8 (0.7)	30 (2)
Leakage	**0.5 ml/hr.**	**4.0 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, (%)	0-10	0-15	0-15	0-20
Weight Increase, (%)	<15	-	<20	<20
Tensile Loss, (%)	-	<55	-	-

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] 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, consult Garlock Engineering.

[4] This "M" value, based on ambient temperature leakage with nitrogen, is high. Field experience has shown that lower values would be workable in elevated temperatures. Consult Applications Engineering.

[5] A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm2), Pressure = 9.8psig (0.7bar): Typical = 0.5ml/hr, Max = 1.5ml/hr. M9: Tensile Strength = 1,400psi min. (9.7N/mm2 min.).