

## Garlock 5500

### MATERIAL PROPERTIES\*:

<b>Color:</b>	Gray
<b>Composition:</b>	Inorganic fibers with a nitrile binder
<b>Fluid Services<sup>1</sup>:</b>	Saturated steam <sup>3</sup> , most refrigerants, water, oils, gasoline and aliphatic hydrocarbons
<b>Temperature<sup>2</sup>, °F (°C)</b>	
Minimum:	-100 (-73)
Continuous Max:	+550 (+288)
Maximum:	+800 (+427)
<b>Pressure<sup>2</sup>, Maximum, psig (bar):</b>	1200 (83)
<b>P x T (max.)<sup>2</sup>, psig x °F (bar x °C):</b>	
1/32 and 1/16":	400,000 (14,000)
1/8"	275,000 (9,600)
<b>Meets Specification:</b>	ABS (American Bureau of Shipping) and Fire Safe

### TYPICAL PHYSICAL PROPERTIES\*:

<b>ASTM F36</b>	<b>Compressibility</b> , range, %:	7-17	
<b>ASTM F36</b>	<b>Recovery</b> , %:	50	
<b>ASTM F38</b>	<b>Creep Relaxation</b> , %:	15	
<b>ASTM F152</b>	<b>Tensile</b> , Across Grain, psi (N/mm <sup>2</sup> ):	1500 (10)	
<b>ASTM F1315</b>	<b>Density</b> , lbs./ft. <sup>3</sup> (grams/cm <sup>3</sup> ):	110 (1.76)	
<b>ASTM F433</b>	<b>Thermal Conductivity (K)</b> W/m <sup>2</sup> K (Btu.in./hr.ft. <sup>2</sup> .°F)	0.43-0.53 (3.00-3.65)	
<b>ASTM D149</b>	<b>Dielectric Properties</b> , range, volts/mil.		
	Sample conditioning	<u>1/16"</u>	<u>1/8"</u>
	3 hours at 250°F:	284	245
	96 hours at 100% Relative Humidity:	-	-
<b>ASTM F586</b>	<b>Design Factors</b>	<u>1/16" &amp; Under</u>	<u>1/8"</u>
	"m" factor:	6.6	6.6
	"y" factor, psi (N/mm <sup>2</sup> )	2600 (17.9)	3300 (22.8)
<b>ROTT</b>	<b>Gasket Constants</b>	Gb=1,247	a=0.249 Gs=11.0
<b>ASTM F104</b>	<b>Line Call Out</b>	F712103A9B4E23K7L501M4 <sup>(4)</sup>	

### SEALING CHARACTERISTICS\*

	ASTM F37B Fuel A	ASTM F37B Nitrogen	DIN 3535-4 Gas Permeability
<b>Gasket Load</b> , psi (N/mm <sup>2</sup> ):	500 (3.5)	3000 (20.7)	4640 (32)
<b>Internal Pressure</b> , psig (bar):	9.8 (0.7)	30 (2)	580 (40)
<b>Leakage</b>	<b>0.2 ml/hr.</b>	<b>1.0 ml/hr.</b>	<b>0.05 cc/min</b>

## 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	0-10	0-15
Weight Increase, (%)	<15	-	<10	<15
Tensile Loss, (%)	-	<40	-	-

### 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

<sup>1</sup> See Garlock chemical resistance guide.

<sup>2</sup> Based on ANSI RF flanges at our preferred torque. When approaching maximum pressure, continuous operating temperature, minimum temperature or 50% of maximum P<sub>x</sub>T, consult Garlock Applications Engineering. Minimum temperature rating is conservative.

<sup>3</sup> 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.

<sup>4</sup> A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm<sup>2</sup>), Pressure = 9.8psig (0.7bar): Typical = 0.2ml/hr, Max = 1.0ml/hr. A9: Leakage in Nitrogen, Gasket Load = 3,000psi (20.7N/mm<sup>2</sup>), Pressure = 30psig (2bar): Typical = 0.5ml/hr, Max = 1.5ml/hr.