

Compressed, Non-Asbestos (CNA) Gasketing Line

Garlock: *Blue Gard 3300*

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SEALING TECHNOLOGIES®

DESCRIPTION

The Garlock® BLUE-GARD® compressed, non-asbestos (CNA) gasketing line offers a variety of elastomers to excel in a wide range of services. The unique blend of aramid fibers, fillers and elastomeric binders provides improved torque retention and drastically lowered emissions levels. BLUE-GARD® CNA Gasketing offers cost savings by cutting operational costs through reduced waste, maintenance, stocked inventory, fluid loss, and energy consumption.

BENEFITS

Excellent sealability

- *Unique blend of aramid fibers, fillers and a neoprene rubber binder provides improved torque retention and drastically lowered emissions levels*

Cost savings

- *Cuts Operational costs through reduced: Waste - Maintenance - Stocked inventory - Fluid Loss - Engery Consumption*

DISCLAIMER

All data and statements concerning these products may be considered as being indicative of representative properties and characteristics obtainable. We make no warranty, expressed or implied, concerning actual use or results because of industry specific influences. All of the product data is nominal and does not represent a specification.

Material Properties

Colour:	Black
Composition:	Aramid fibers with a neoprene binder
Fluid Services ¹ :	Water, saturated steam ⁴ , refrigerants, oils and fuels
Temperature ² , °F (°C)	
Minimum:	-100 (-73)
Continuous:	+400 (+205)
Maximum:	+700 (+371)
Pressure ² , Maximum, psig (bar):	1200 (83)
P × T (max.) ² , psig × °F (bar × °C)	
1/32 and 1/16":	350,000 (12,000)
1/8":	250,000 (8,600)

Physical Properties

Compressibility, range, %:	7-17
Recovery, %:	50
Creep Relaxation, %:	18
Tensile, Across Grain, psi (N/mm ²):	2250 (15)
Density, lbs./ft. ³ (grams/cm ³):	100 (1.60)
Thermal Conductivity (K), W/m °K (Btu.in./hr.ft. ² .°F):	0.29 - 0.38 (2.00 - 2.65)
Dielectric Properties, range, volts/mil.	
Sample conditioning	<u>1/16"</u> <u>1/8"</u>
3 hours at 250 °F:	392 ⁽³⁾ , 517 269⁽³⁾
96 hours at 100% Relative Humidity:	78 73
Design Factors	<u>1/16" & Under</u> <u>1/8"</u>
"m" factor:	2.1 4.0
"y" factor, psi (N/mm ²):	3050 (21.0) 3500 (24.1)
Line Call Out:	F712403A9B4E34K5L103M9 ⁽⁵⁾

Sealing Characteristics

	ASTM F37B Fuel A	ASTM F37B Nitrogen	DIN 3535-4 Gas Permeability
Gasket Load, psi (N/mm ²):	500 (3.5)	3000 (20.7)	4640 (32)
Internal Pressure, psig (bar):	9.8 (0.7)	30 (2)	580 (40)
Leakage	0.2 ml/hr.	1.0 ml/hr.	0.08 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, (%)	0-15	15-30	0-10	5-20
Weight Increase, (%)	<15	-	<20	<20
Tensile Loss, (%)	-	<50	-	-

NOTE:
 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×T, 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 Garlock Engineering.
⁵ A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm²), Pressure = 9.8psig (0.7bar): Typical = 0.2ml/hr, Max = 1.5ml/hr. A9: Leakage in Nitrogen, Gasket Load = 3,000psi (20.7N/mm²), Pressure = 30psig (2bar): Typical = 1.0ml/hr, Max = 2.0ml/hr.