High Temp Compressed Graphite or Carbon Fiber Gasketing

Typical Physical Properties*

		G-9900[4]	9800[4]	9850[4]
Color		Mahogany	Black	Black
Composition		Graphite with nitrile	Carbon with SBR	Carbon with nitrile
Temperature[1]	Maximum Minimum Continuous max.	+1,000°F (+540°C) -100°F (-75°C) +650°F (+340°C)	+900°F (+480°C) -100°F (-75°C) +650°F (+340°C)	+900°F (+480°C) -100°F (-75°C) +650°F (+340°C)
Pressure[1]	psig (bar)	2,000 (138)	2,000 (138)	2,000 (138)
P x T, max.[1] (psig x °F) (bar x °C)	1/32", 1/16" (0.8 mm, 1.6 mm) 1/8" (3.2 mm)	700,000 (25,000) 350,000 (12,000)	700,000 (25,000) 350,000 (12,000)	700,000 (25,000) 350,000 (12,000)
Sealability (ASTM F37B)[2]				
ASTM Fuel A	ml/hr	0.1	0.1	0.1
Nitrogen	ml/hr	0.1	0.1	0.1
Creep Relaxation (ASTM F38)	%	9	15	15
Compressibility Range (ASTM F36)	%	7-17	7-17	7-17
Recovery (ASTM F36)	%	> 65	> 55	> 56
Fluid Resistance (ASTM F146 @ 5 hours)				
ASTM #1 Oil at +300°F (+150°C)				
Thickness increase	%	0-5	0-10	0-5
Weight increase	%	< 10	< 20	< 10
ASTM IRM #903 Oil at +300°F (+150°C)				
Thickness increase	%	0-10	15-40	0-10
Tensile loss	%	< 35	< 65	< 35
ASTM Fuel A at +70-85°F (+20-30°C)				
Thickness increase	%	0-5	0-10	0-5
Weight increase	%	< 7	< 20	< 7
ASTM Fuel B +70-85°F (+20-30°C)				
Thickness increase	%	0-10	5-20	0-10
Weight increase	%	< 15	< 20	< 15
Tensile Strength across grain (ASTM F152)	psi (N/mm^2)	1,800 (12)	1,500 (10)	1,800 (12)
Density	lbs/ft^3 (g/cm^3)	110 (1.76)	105 (1.68)	105 (1.68)
Gas Permeability (DIN 3535 Part 4)[3]	cc/min.	0.015	0.015	0.015

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.

*** Values do not constitute specification limits**

All styles are furnished with an anti-stick parting agent as standard.

Notes:

1 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 Engineering.

2 ASTM F37B Sealability
ASTM Fuel A (isooctane):
Gasket load = 500 psi (3.5 N/mm^2), Int. pressure = 9.8 psig (0.7 bar)
Nitrogen:
Gasket load = 3,000 psi (20.7 N/mm^2), Int. pressure = 30 psig (2 bar)

3 DIN 3535 Part 4, Gas Permeability, cc/min. (1/16" thick)
Nitrogen:
Gasket load = 4,640 psi (32 N/mm^2), Int. pressure = 580 psig (40 bar)

4 Saturated steam service guidelines:
- For optimal performance, use thinner gaskets when possible.
- Minimum recommended assembly stress = 4,800 psi.
- Preferred assembly stress = 6,000 psi to 10,000 psi.
- Retorque the bolts/studs prior to pressurizing the assembly.
- If the service is superheated steam, contact Applications Engineering.