

Style 9850

MATERIAL PROPERTIES*:

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|--|--|
| Color: | Black |
| Composition: | Carbon fibers with a nitrile binder |
| Fluid Services (see chemical resistance guide): | Saturated steam ² , water, oils, gasoline, aliphatic hydrocarbons and most refrigerants |
| Temperature¹, °F (°C) | |
| Minimum: | -100 (-75) |
| Continuous Max: | +650 (+343) |
| Maximum: | +900 (+482) |
| Pressure¹, Maximum, psig (bar): | 2000 (138) |
| P x T (max.)¹, psig x °F (bar x °C): | |
| 1/32 and 1/16": | 700,000 (25,000) |
| 1/8" | 350,000 (12,000) |
| Meets Specifications: | Fire Safe |

TYPICAL PHYSICAL PROPERTIES*:

| | | |
|-------------------|---|---------------------------|
| ASTM F36 | Compressibility , average, %: | 8 |
| ASTM F36 | Recovery , %: | 55 |
| ASTM F38 | Creep Relaxation , %: | 15 |
| ASTM F152 | Tensile , Across Grain, psi (N/mm ²): | 1800 (12) |
| ASTM F1315 | Density , lbs./ft. ³ (grams/cm ³): | 105 (1.68) |
| ASTM F433 | Thermal Conductivity (K) , W/m ² K (Btu·in./hr·ft. ² ·°F): | 0.50-0.60 (3.50-4.15) |
| ASTM D149 | Dielectric Properties , range, volts/mil. | |
| | Sample conditioning | <u>1/16"</u> <u>1/8"</u> |
| | 3 hours at 250°F | <2 - |
| | 96 hours at 100% Relative Humidity: | - - |
| ASTM F586 | Design Factors | 1/16" & Under <u>1/8"</u> |
| | "m" factor: | 6.5 8 |
| | "y" factor, psi (N/mm ²): | 2550 (17.6) 2800 (19.3) |
| ROTT | Gasket Constants , 1/16": | Gb=1,591 a=0.239 Gs=9.3 |

SEALING CHARACTERISTICS*

| | ASTM F37B – Fuel A | ASTM F37B - Nitrogen | DIN 3535 – Nitrogen |
|--|---------------------------|-----------------------------|----------------------------|
| 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 | 0.3 ml/hr. | 0.6 ml/hr. | 0.015 cc/min |

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

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 Applications Engineering. Minimum temperature rating is conservative.

² 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.

REV: 10/11/2016