



Garlock BLUE-GARD® 3000

MATERIAL PROPERTIES*

| | |
|---|--|
| Color: | Blue |
| Composition: | Aramid fibers with a nitrile binder |
| Fluid Services¹: | Water, aliphatic hydrocarbons, oils and gasoline |
| Temperature², °F (°C) | |
| Minimum: | -100 (-73) |
| Continuous Max: | +400 (+205) |
| Maximum: | +700 (+371) |
| Pressure², Maximum, psig (bar): | 1000 (70) |
| P x T (max.)², psig x °F (bar x °C) | |
| 1/32 and 1/16": | 350,000 (12,000) |
| 1/8": | 250,000 (8,600) |
| Meets Specification: | ABS (American Bureau of Shipping), WRC BS 6920 and BS 7531 Grade Y |

TYPICAL PHYSICAL PROPERTIES*

| | | |
|-------------------|--|--|
| ASTM F36 | Compressibility, range, %: | 7-17 |
| ASTM F36 | Recovery, %: | 50 |
| ASTM F38 | Creep Relaxation, %: | 21 |
| ASTM F152 | Tensile, Across Grain, psi (N/mm²): | 2250 (15) |
| ASTM F1315 | Density, lbs./ft.³ (grams/cm³): | 100 (1.60) |
| ASTM F433 | Thermal Conductivity (K), W/m²K (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: | 396 ⁽³⁾ -832 257 ⁽³⁾ -363 |
| | 96 hours at 100% Relative Humidity: | 271 142 |
| ASTM F586 | Design Factors | 1/16" & Under 1/8" |
| | "m" factor: | 4.2 5.2 |
| | "y" factor, psi (N/mm ²): | 3050 (21.0) 4400 (30.3) |
| ASTM F104 | Line Call Out: | F712102A9B4E22K5L101M5 ⁽⁴⁾ |

SEALING CHARACTERISTICS*

| | ASTM F37B Fuel A | ASTM F37B Nitrogen | DIN 3535- 4 Gas Permeability |
|---|-----------------------------|-------------------------------|---|
| Gasket Load, psi (N/mm²): | 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. | 0.6 ml/hr. | 0.05 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, (%) | 0-5 | 0-15 | 0-5 | 0-10 |
| Weight Increase, (%) | <8 | <20 | <8 | <15 |
| Tensile Loss, (%) | - | <35 | - | - |

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 P x T, consult Garlock Applications Engineering. Minimum temperature rating is conservative.

³ Indicates current arced around and not through gasket. Dielectric higher than indicated.

⁴ A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm²), Pressure = 9.8psig (0.7bar): Typical = 0.2ml/hr, Max = 1.0ml/hr. A9: Leakage in Nitrogen, Gasket Load = 3,000psi (20.7N/mm²), Pressure = 30psig (2bar): Typical = 0.6ml/hr, Max = 1.5ml/hr.