



Garlock 2900/2950

MATERIAL PROPERTIES*

| | |
|---|--|
| Color: | 2900 Black, 2950 Green |
| Composition: | Aramid fibers with a nitrile binder |
| Fluid Services¹: | Water, aliphatic hydrocarbons, oils and gasoline |
| Temperature², °F (°C) | |
| Minimum: | -100 (-75) |
| 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) |

TYPICAL PHYSICAL PROPERTIES*

| | | |
|-------------------|--|--|
| ASTM F36 | Compressibility , range, %: | 7-17 |
| ASTM F36 | Recovery , %: | 50 |
| ASTM F38 | Creep Relaxation , %: | 25 |
| ASTM F152 | Tensile , Across Grain, psi (N/mm ²): | 1500 (10) |
| 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): | 0.29-0.38 (2.00-2.65) |
| ASTM D149 | Dielectric Properties , range, volts/mil. | |
| | Sample conditioning | 1/16" 1/8" |
| | 3 hours at 250°F: | 342 ⁽³⁾ 254 ⁽³⁾ |
| | 96 hours at 100% Relative Humidity: | 26 28 |
| ASTM F586 | Design Factors | 1/16" & Under 1/8" |
| | "m" factor: | 4.5 ⁽⁴⁾ 7.0 ⁽⁴⁾ |
| | "y" factor, psi (N/mm ²): | 3000 ⁽⁴⁾ (20.7) 4000 ⁽⁴⁾ (27.6) |
| ASTM F104 | Line Call Out: | F712102A9B5E33K5L101M5 |

SEALING CHARACTERISTICS*

| | ASTM F37B Fuel A | ASTM F37B Nitrogen |
|--|-----------------------------|-------------------------------|
| Gasket Load , psi (N/mm ²): | 500 (3.5) | 3000 (20.7) |
| Internal Pressure , psig (bar): | 9.8 (0.7) | 30 (2) |
| Leakage | 0.6 ml/hr. | 1.2 ml/hr. |

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 , (%) | 0-10 | - | 0-10 | 0-20 |
| Tensile Loss , (%) | - | 0-35 | - | - |

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

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

⁴ These values are from style 2950. Style 2900 has higher values.

⁵ A9: Leakage in Fuel A (Isooctane), Gasket Load = 500psi (3.5N/mm²), Pressure = 9.8psig (0.7bar): Typical = 0.25ml/hr, Max = 1.5ml/hr. A9: Leakage in Nitrogen, Gasket Load = 3,000psi (20.7N/mm²), Pressure = 30psig (2bar): Typical = 1.0ml/hr, Max = 2.5ml/hr.