Garlock
SEALING TECHNOLOGIES®
an EnPro Industries company

# Garlock 2500

## MATERIAL PROPERTIES*

| | |
|---|---|
| **Color:** | Green |
| **Composition:** | Aramid fibers with a nitrile binder. |
| **Fluid Services[1]:** | Water, saturated steam[5], aliphatic hydrocarbons, oils and gasoline |
| **Temperature[2]**, °F (°C) | |
| Minimum: | -100 (-73) |
| Continuous Max: | +400 (+205) |
| **Pressure[2]**, Maximum, psig (bar): | 1000 (70) |
| **P x T (max.)[2]**, psig x °F (bar x °C) | |
| 1/32 and 1/16": | 250,000 (8,600) |
| 1/8": | 150,000 (5,100) |

## TYPICAL PHYSICAL PROPERTIES*

| | | |
|---|---|---|
| **ASTM F36** | **Compressibility**, range, %: | 7-17 |
| **ASTM F36** | **Recovery**, %: | 40 |
| **ASTM F38** | **Creep Relaxation**, %: | 30 |
| **ASTM F152** | **Tensile**, Across Grain, psi (N/mm$^2$): | 1250 (8.6) |
| **ASTM F1315** | **Density**, lbs./ft.$^3$ (grams/cm$^3$): | 120 (1.9) |
| **ASTM D149** | **Dielectric Properties**, range, volts/mil. | |
| | Sample conditioning | 1/16" |
| | 3 hours at 250°F: | 350+(3) |
| **ASTM F586** | **Design Factors** | 1/16" & Under |
| | "m" factor: | 6(4) |
| | "y" factor, psi (N/mm$^2$): | 2000(13.8) |

## SEALING CHARACTERISTICS*

| | ASTM F37B Fuel A | ASTM F37B Nitrogen |
|---|---|---|
| **Gasket Load**, psi (N/mm2): | 500 (3.5) | 3000 (20.7) |
| **Internal Pressure**, psig (bar): | 9.8 (0.7) | 30 (2) |
| **Leakage** | **1.0 ml/hr.** | **2.0 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**, (%) | 0-10 | 0-15 | 0-10 | 0-10 |
| **Weight Increase,** (%) | <15 | — | <10 | <15 |
| **Tensile loss (%)** | — | 0 - 40 | — | — |

**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. Use the column for Style 2900

[2] 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

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

[4] This "M" value, based on ambient temperature leakage with nitrogen, is high. Field experience has shown that lower values would be workable in elevated temperatures. Consult Applications Engineerin

[5] These styles are appropriate for steam service 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.