



## Garlock GYLON® 3565 ENVELON®

### MATERIAL PROPERTIES\*

|   |   |
|---|---|
| <b>Color:</b>   | White exterior and blue interior  |
| <b>Composition:</b>                                   | PTFE with Aluminosilicate microspheres  |
| <b>Fluid Services<sup>1</sup>:</b>                    | Moderate concentrations of acids, some caustics, hydrocarbons, solvents, hydrogen peroxide, refrigerants and cryogenics |
| <b>Temperature<sup>2</sup>, °F (°C)</b>               |   |
| Minimum:  | -450 (-268)   |
| Continuous Max:                                       | +500 (+260)   |
| <b>Pressure<sup>2</sup>, Maximum, psig (bar):</b>     | 1200 (83)   |
| <b>P x T (max.)<sup>2</sup>, psig x °F (bar x °C)</b> |   |
| 1/32 and 1/16":                                       | 350,000 (12,000)  |
| 1/8":   | 250,000 (8,600)   |
| <b>Flammability:</b>                                  | Will Not Burn   |
| <b>Bacterial Growth:</b>                              | Will Not Support  |
| <b>Meets Specification:</b>                           | FDA (Food and Drug Administration)  |

### TYPICAL PHYSICAL PROPERTIES\*

|                   |   |                                   |             |
|-------------------|---|-----------------------------------|-------------|
| <b>ASTM F36</b>   | <b>Compressibility, %:</b>                                | 30-50 <sup>(3)</sup>              |             |
| <b>ASTM F36</b>   | <b>Recovery, %:</b>                                       | 35 <sup>(3)</sup>                 |             |
| <b>ASTM F38</b>   | <b>Creep Relaxation, %:</b>                               | 35 <sup>(3)</sup>                 |             |
| <b>ASTM F152</b>  | <b>Tensile, Across Grain, psi (N/mm<sup>2</sup>):</b>     | 1800 (12.4) <sup>3</sup>          |             |
| <b>ASTM D792</b>  | <b>Specific Gravity:</b>                                  | 1.65                              |             |
| <b>ASTM D1708</b> | <b>Modulus @ 100% Elongation, psi (N/mm<sup>2</sup>):</b> | 1300 (8.9)                        |             |
| <b>ASTM D149</b>  | <b>Dielectric Properties, range, volts/mil.</b>           |                                   |             |
|                   | Sample conditioning                                       | <u>1/16"</u>                      | <u>1/8"</u> |
|                   | 3 hours at 250°F:   | 301                               | -           |
|                   | 96 hours at 100% Relative Humidity                        | 221                               | -           |
| <b>ASTM F586</b>  | <b>Design Factors</b>                                     | <u>1/16" &amp; Under</u>          | <u>1/8"</u> |
|                   | "m" factor:   | 2.8                               | 3.7         |
|                   | "y" factor, psi (N/mm <sup>2</sup> ):                     | 1400 (9.6)                        | 2300 (15.9) |
| <b>ASTM F104</b>  | <b>Line Call Out:</b>                                     | F457999A9B6E99M6 <sup>(3,4)</sup> |             |

### SEALING CHARACTERISTICS\*

|   | <b>ASTM F37B<br/>Fuel A</b>      | <b>DIN 3535- 4<br/>Gas Permeability</b> |
|---|----------------------------------|---|
| <b>Gasket Load, psi (N/mm<sup>2</sup>):</b> | 1000 (7)                         | 4640 (32)                               |
| <b>Internal Pressure, psig (bar):</b>       | 9.8 (0.7)                        | 580 (40)                                |
| <b>Leakage</b>                              | <b>0.33<sup>(3)</sup> ml/hr.</b> | <b>&lt;0.015<sup>(3)</sup> cc/min</b>   |

#### 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 1/16" (1.6mm) sheet thickness unless otherwise mentioned. See Note (3).

\* Values do not constitute specification Limits

<sup>1</sup> See Garlock chemical resistance guide.

<sup>2</sup> 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.

<sup>3</sup> Tested on 1/16" thick material.

<sup>4</sup> Increase in IRM Oil #903 (fourth numeral 9 is thickness, fifth numeral 9 is weight): Thickness = 1.0% max, Weight = 2.0% max. Sixth numeral 9: % Increase in Water: Weight = 1.0% max. A9: Leakage in Fuel A (Isooctane), Pressure = 9.8psig (0.7bar), Gasket Load = 1,000psi (7.0N/mm<sup>2</sup>): Typical = 0.33ml/hr, Max = 1.0ml/hr. E99: % Increase in ASTM Fuel B: Weight: 2.0% max., Thickness: 1.0% max.