



## GYLON EPIX™ Style 3500 EPX

### MATERIAL PROPERTIES

|  |  |
|--|--|
| Color:   | Fawn   |
| Composition:                                   | PTFE with silica   |
| Fluid Service (see chemical resistance guide): | Strong acids (except hydrofluoric), steam, solvents, hydrocarbons, chlorine & cryogenics |
| Temperature                                    |  |
| Minimum:                                       | -450°F (-268°C)  |
| Ideal Operating Limit:                         | 400°F (204°C)  |
| Maximum:                                       | 500°F (260°C) see graph→   |
| Pressure                                       |  |
| Ideal Operating Limit:                         | 750 psig (52 bar)  |
| Minimum  | Full Vacuum  |
| Maximum:                                       | 1200 psig (83 bar) see graph→  |
| Bacterial Growth:                              | Will Not Support   |
| Specifications:                                | FDA, USDA, USP <87> <88>, TA Luft Approved, REACH / RoHS Compliant                       |

### TYPICAL PHYSICAL PROPERTIES

|            |   |                      |
|------------|---|----------------------|
| ASTM F36L  | Compressibility (average):                            | 47%                  |
| ASTM F36L  | Recovery:   | 17%                  |
| ASTM D1708 | Tensile (across grain):                               | 2,000 psi (13.8 MPa) |
| DIN 52913  | Load Retention  |                      |
|            | 16 hrs @ 500°F (260°) 7,250 psi (50MPa) gasket stress | 50%                  |

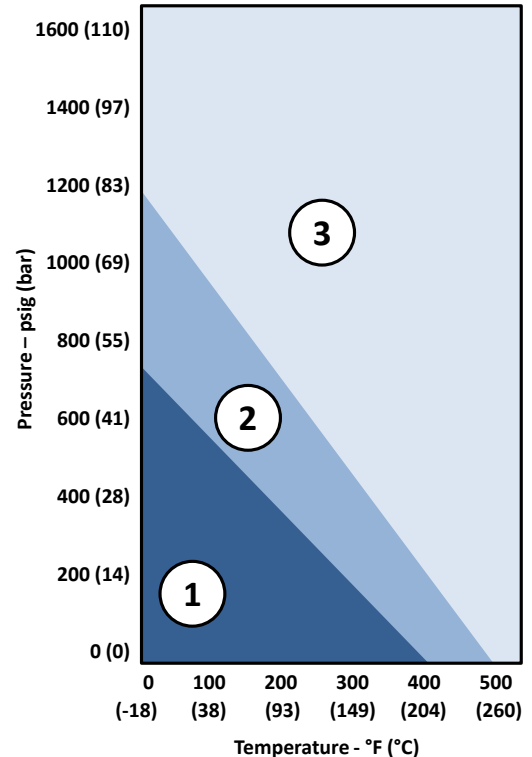
### DESIGN & PERFORMANCE VALUES

|            |                                 |                      |
|------------|---------------------------------|----------------------|
| ASTM F3149 | Design Factors                  |                      |
|            | “m” factor:                     | 2.5                  |
|            | “y” factor:                     | 2,000 psi (13.8 MPa) |
| ASTM ROTT  | Gasket Constants                |                      |
|            | Gb:                             | 174 psi              |
|            | a:                              | 0.424                |
|            | Gs:                             | 2.03 psi             |
| ASTM HOBT2 | Hot Blowout with thermal cycles |                      |
|            | Rating at 435 psig:             | 530°F (277°C)        |

### SEALING CHARACTERISTICS

|           |   |                   |
|-----------|---|-------------------|
| ASTM F37B | Sealability (0.2" ID x 1.20" OD test gasket size)             |                   |
|           | Fuel A – 9.8 psig, 1,000 psi gasket stress:                   | 0.2 ml/hr         |
|           | Nitrogen – 30 psig, 3,000 psi gasket stress:                  | 0.25 ml/hr        |
| DIN 3535  | Gas Permeability  |                   |
|           | Part 6 – 580 psig (40 bar), 4,640 psi (32 MPa) gasket stress: | 0.0005 mg/(m-sec) |
|           | Part 4 – 580 psig (40 bar), 4,640 psi (32 MPa) gasket stress: | <0.006 cc/min     |

### PRESSURE-TEMPERATURE RATING



### LEGEND:

- 1 - Suitable for use if chemically compatible and installed using Garlock's recommended installation practices and assembly stresses.
- 2 - Please consult Garlock Applications Engineering to confirm the suitability with your service conditions.
- 3 - Generally not suitable – please consult Garlock Applications Engineering to confirm the suitability with your service conditions.

| <b>EN 13555 CHARACTERISTICS</b>   |                          | <b>GYLON EPIX™<br/>Style 3500 EPX†</b> |                             |
|---|--------------------------|--|-----------------------------|
| <b>Q<sub>smax</sub><br/>Maximum Tolerated Assembly Stress<br/>at Various Temperatures</b>   | 68°F (20°C)              | 33,350 psi (230 MPa)                   |                             |
|   | 212°F (100°C)            | 29,000 psi (200 MPa)                   |                             |
|   | 302°F (150°C)            | 29,000 psi (200 MPa)                   |                             |
|   | 392°F (200°C)            | 26,100 psi (180 MPa)                   |                             |
|   | 482°F (250°C)            | 23,200 psi (160 MPa)                   |                             |
| <b>Q<sub>min</sub><br/>Minimum Stress Needed to Reach 0.01<br/>[mg/(m-sec)] at Various System<br/>Pressures</b>   | 145-290 psig (10-20 bar) | 725 psi (5 MPa)                        |                             |
|   | 580 psig (40 bar)        | 1160 psi (8 MPa)                       |                             |
|   | 1,160 psig (80 bar)      | 1,740 psi (12 MPa)                     |                             |
| <b>Maximum Sealability Class at 68°F<br/>(20°C) at 2,900 psi (20 MPa) at Various<br/>System Pressures</b>   | 145-290 psig (10-20 bar) | 1.0x10 <sup>-3</sup> mg/(s*m)          |                             |
|   | 580 psig (40 bar)        | 1.0x10 <sup>-3</sup> mg/(s*m)          |                             |
|   | 1,160 psig (80 bar)      | 1.0x10 <sup>-3</sup> mg/(s*m)          |                             |
| <b>Maximum Sealability Class at 68°F<br/>(20°C) at 23,200 psi (160 MPa)<br/>Assembly Stress at Noted System<br/>Pressure</b>  | 580 psig (40 bar)        | 1.0x10 <sup>-6</sup> mg/(s*m)          |                             |
| <b>Initial &amp; Residual Assembly Stress<br/>Required to Achieve Sealability of 0.01<br/>mg/(m-sec) and Residual Load After<br/>Unloading to Maintain Sealability Class<br/>L0.01 mg/(m-sec)</b> | System Pressure          | QA – Initial Assembly<br>Stress        | Residual Assembly<br>Stress |
|   | 145 psig (10 bar)        | 1,450 psi (10 MPa)                     | 435 psi (3 MPa)             |
|   | 290 psig (20 bar)        | 1,450 psi (10 MPa)                     | 435 psi (3 MPa)             |
|   | 580 psig (40 bar)        | 1,450 psi (10 MPa)                     | 725 psi (5 MPa)             |
|   | 1,160 psig (80 bar)      | 2,900 psi (20 MPa)                     | 1,450 psi (10 MPa)          |
| † - test data is based on GYLON Style 3501-E  |                          |  |                             |
| Data in accordance to DIN EN 13555 for calculations to be done in accordance to DIN EN 1591-1   |                          |  |                             |
| Data can be used for ASME PCC-1:2013 including Appendix "I" or Appendix "O".  |                          |  |                             |
| Please contact Garlock Engineering if gasket cross-section (width) is less than 0.5" (12.7mm).  |                          |  |                             |

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