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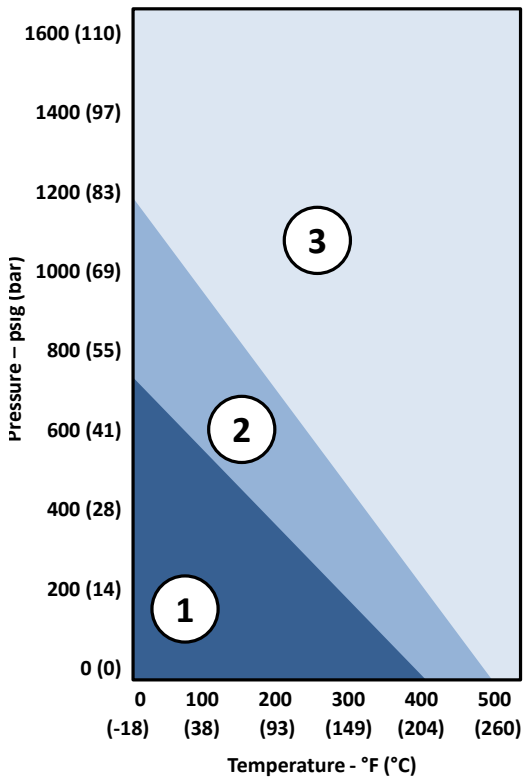
GYLON EPIX™ Style 3500 EPX

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 chart→
Pressure	
Ideal Operating Limit:	750 psig (52 bar)
Maximum:	1200 psig (83 bar) see chart→
Bacterial Growth:	Will Not Support
Specifications:	FDA, USDA, USP <87> <88>, TA Luft Approved, REACH / RoHS Compliant

TEMPERATURE & PRESSURE 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.

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*s
	Part 4 – 580 psig (40 bar), 4,640 psi (32 MPa) gasket stress:	<0.006 cc/min

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EN 13555 CHARACTERISTICS		GYLON EPIX™ Style 3500 EPX†
Qsmax Maximum Tolerated Assembly Stress at Various Temperatures	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)
Qmin Minimum Stress Needed to Reach 0.01 [mg/(s*m)] at Various System Pressures	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)
Maximum Sealability Class at 68°F (20°C) at 2,900 psi (20 MPa) at Various System Pressures	145-290 psig (10-20 bar)	$1.0x10^{-3}$ mg/(s*m)
	580 psig (40 bar)	$1.0x10^{-3}$ mg/(s*m)
	1,160 psig (80 bar)	$1.0x10^{-3}$ mg/(s*m)
Maximum Sealability Class at 68°F (20°C) at 23,200 psi (160 MPa) Assembly Stress at Noted System Pressure	580 psig (40 bar)	$1.0x10^{-6}$ mg/(s*m)

Initial & Residual Assembly Stress Required to Achieve Sealability of 0.01 mg/(s*m) and Residual Load After Unloading to Maintain Sealability Class L0.01 mg/(s*m)	System Pressure	QA – Initial Assembly Stress	Residual Assembly 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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