

Gasket Assembly Stress Recommendations

The minimum recommended assembly stress for Garlock gasketing products differ from “m” and “y” values, which do not take factors such as flange condition, temperature fluctuation, vibration and/or blowout resistance into account. Garlock offers the following minimum assembly stresses as rules of thumb to use to calculate installation bolt torque values:

GYLON®, GYLON EPIX™, GRAPH-LOCK®, and Compressed Fiber Gasketing

Operating Pressure	Minimum Recommended Assembly Stress ^[1] - psi (N/mm ²)			
	1/32” (0.8mm)	1/16” (1.6mm)	3/32” (2.4mm) GYLON EPIX™	1/8” (3.2mm)
Up to 300 psig (20 bar)	2500 (17)	3600 (25)	3600 (25)	4800 (33)
Up to 800 psig (55 bar)	4800 (33)	5400 (37)	5400 (37)	6400 (44)
Up to 2000 psig (140 bar)	7400 (51)	8400 (58)	8400 (58)	9400 (65)

Maximum Recommended Assembly Stress - psi (N/mm ²)				
GYLON® Gasketing (3500, 3504, 3510, 3540, 3545)	15,000 (103)		Utility Grade Sheets (700, 800, 2900's)	15,000 (103)
GYLON EPIX™ (3500 EPX, 3504 EPX, 3510 EPX)	15,000 (103)		BLUE-GARD® (3000, 3200, 3300, 3400, 3700)	15,000 (103)
GRAPH-LOCK® (3123, 3125, 3124, 3126, 3125SS)	10,000 (69)		Inorganic Fiber (5500)	15,000 (103)
GRAPH-LOCK® (3125TC & 3128)	15,000 (103)		MULTI-SWELL™ (3760 & 3760-U)	10,000 (69)
THERMa-PUR (4122-FC)	7,500 (51)		Extreme Grades (9800, 9850, 9900)	15,000 (103)

^[1] The minimum recommended gasket stresses shown are for gaseous or liquid service. Most GYLON®, GRAPH-LOCK®, Compressed Fiber gaskets will typically seal lower pressure liquids with stresses in the range of 1500 to 2000 psi. MULTI-SWELL™ 3760 has shown to seal lower pressure liquid services at stresses as low as 500 psi when used in fluids that create swell. Please contact Applications Engineering when using these materials as full face gaskets in flat faced flanges, especially when dealing with gaseous media.

Elastomeric (Rubber) & STRESS SAVER® Gaskets

Recommended Assembly Stress - psi (N/mm ²)		
	Minimum	Maximum
Elastomers (<70 duro Shore A) ^[2]	600 (4)	900 (6)
Elastomers (≥ 70 duro Shore A) ^[2]	600 (4)	1200 (8)
STRESS SAVER® (370, 6800, XP) ^[3]	600 (4)	1200 (8)
3504/3505 GYLON STRESS SAVER® ^[3]	600 (4)	15,000 (103)

^[2] Most elastomeric gaskets will seal at approximately 200 psi assembly stress.

^[3] STRESS SAVER® gaskets typically seal at 300 psi assembly stress. Do not exceed the flange manufacturer's maximum allowable torque.

August 2022