

Garlock STRESS SAVER[®] Gaskets

Superior low-torque gaskets for metallic or non-metallic flanges

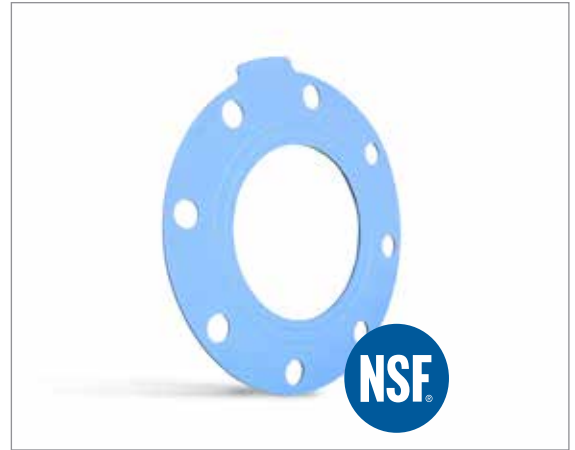


STRESS SAVER® GYLON® 3504

Since 1996 Garlock has successfully helped to seal low load flanges with our STRESS SAVER® family of products. The molded raised ribs help to create a tighter seal by concentrating the compressive load, ideal for lightweight piping. Our patented STRESS SAVER® GYLON® 3504* combines these proven sealing advantages with the performance characteristics of the industry recognized GYLON® 3504. The combination of these two time-tested configurations make STRESS SAVER® GYLON® 3504 the ideal sealing solution.

VALUE AND BENEFITS

- » Versatility - Suitable for both metallic and non-metallic piping with either flat or raised face flanges, in sizes 1/2" through 12" for 150# and 300# classes as well as ASME and DIN standards
- » Chemical Resistance – STRESS SAVER® GYLON® 3504 is ideal for a wide range of caustics and acids, helping to simplify the selection process
- » Limited Creep and Cold-Flow – Greatly reduces the leakage after installation and system cycling
- » Superior Physical Properties – Higher temperature and pressure capabilities compared to rubber gaskets
- » Homogeneous Construction – Single piece design helps avoid permeation, delamination, fold-over of PTFE envelopes, or splitting when installed against raised sealing surfaces
- » High Purity- FDA, USP Class VI, and NSF-61* as requested
- » *STRESS SAVER® GYLON® 3504 is able to meet the stringent requirements of NSF-61 for potable drinking water applications.



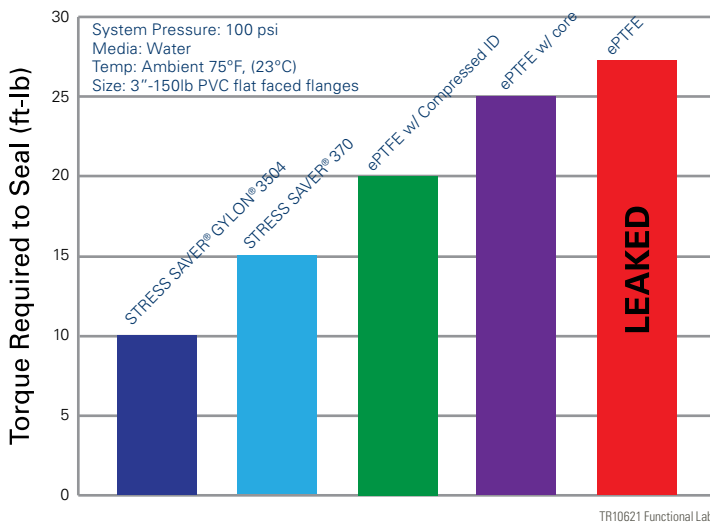
DIN 3535 "STEP LOAD" GAS PERMEABILITY TESTING (NITROGEN)

STRESS SAVER® GYLON® 3504

Gasket Stress (psi)	200	300	600	900	1200	1800	2400	3600	4640
Internal Press (psig)	50			580					
Leakage (cc/min)	<0.011			<0.011					

PLASTIC FLANGE TEST

STRESS SAVER® GYLON® 3504 gaskets seal at lower torque when compared to other low-load sealing gaskets.



THERMAL CYCLE TEST



STRESS SAVER® GYLON® 3504 showed no signs of leakage when installed between smooth, flat face FRP flanges – the flange assembly was subjected to over 3,000 thermal cycles without a re-torque.

- Size: 6" flat face FRP pipe flange w/ lubricated carbon steel bolts
- Temp: 95°F to 180°F
- Media: Water
- Pressure: 150psi
- Torque: 35 ft-lbs (recommended torque per manufacturer)
- Cycle: 30 min ramp up to 180°F
5 min Dwell @180°F
10 min Cool down to 95°F

STRESS SAVER® XP

Single piece molded design made from high performance, proprietary blend of fluoroelastomers. Suitable for use in potable drinking water, steam, and severe chemicals.

VALUE AND BENEFITS

- » Tighter Seal - Lower seating stress than expanded PTFE gasket; ideal for flat-faced non-metallic flanges
- » Chemical Resistance - High performance fluoroelastomer; outperforms traditional fluoroelastomers in severe chemical and steam applications with improved heat resistance.
- » Lubrizol FBC™ System Compatible certification making it suitable for use in CORZAN® (CPVC) Piping
- » Certified to NSF 61 for potable drinking water systems

Corzan is a registered trademark of Lubrizol®



STRESS SAVER® 370

White EPDM elastomer molded with a virgin PTFE envelope. Proprietary process bonds the PTFE to the elastomer without the use of adhesives, eliminating envelope fold-over concerns during installation.

VALUE AND BENEFITS

- » Tighter Seal - Lower seating stress than expanded PTFE gasket; ideal for flat-faced non-metallic flanges
- » Chemical Resistance - Virgin PTFE sealing surface resists a variety of moderate chemicals
- » High Purity - Contaminant-free white EPDM is ideal for ultrapure services: electronics*, pharmaceuticals, and food industries
- » Constructed of FDA approved ingredients**

*Tested by BALAZS Labs for trace metal extractables, anions, cations, and T.O.C.s. Results available upon request.

** Consult Garlock Applications Engineering for FDA information



The STRESS SAVER® Family

INDUSTRIES SERVED

- » Chemical Processing
- » Electronics, semiconductor
- » Food
- » Pharmaceutical
- » Pulp and Paper
- » Potable/Drinking water*

IDEAL FOR

- » PVC
- » FRP
- » PVDF
- » CPVC
- » Polypropylene
- » Cast and ductile iron

* Specify STRESS SAVER® XP and STRESS SAVER® GYLON® 3505

STRESS SAVER®	Flat face flange	Raised face flange
GYLON® 3504	✓	✓
XP	✓	
370	✓	

TYPICAL PHYSICAL PROPERTIES

	STRESS SAVER® GYLON® 3504	STRESS SAVER® XP	STRESS SAVER® 370
Composition:	PTFE with aluminosilicate microspheres	Proprietary blend of fluoroelastomer (70 durometer)	100% Pure PTFE bonded to 65 Duro EPDM
Color:	Blue	Black	PTFE: Sky Blue EPDM: Off-white
Size Range:	1/2" (12.7mm) - 12" (304.8mm)	1/2" (12.7mm) - 24" (609.6mm)	1/2" (12.7mm) - 24" (609.6mm)
Temperature:			
Minimum:	-450°F (-268°C)	-15°F (-26°C)	-40°F (-40°C)
Ideal Operating Limit:	400°F (204°C)	250°F (121°C)	200°F (93°C)
Maximum:	+500°F (+260°C)	+400°F (+204°C)	+300°F (+149°C)
Pressure:			
Ideal Operating Limit:	750 psig (52 bar)	150 psig (10 bar)	150 psig (10 bar)
Maximum:	800 psig (55.2 bar)	250 psig (17 bar)	250 psig (17 bar)
Media³:	All solvents, moderate caustics and acids, hydrocarbons, refrigerants, cryogenics and potable drinking water ⁴	Potable drinking water, steam, most hydrocarbons, gases, solvents	Moderate acids, caustics, gases, water, hydrocarbons
M&Y:	2.0 / 400 psi	0.5 / 100 psi	2.0 / 400 psi

¹ Max pressure is dependent on available compressive stress and is not achievable in all flange types.
² When approaching maximum pressure or temperature, consult Garlock Engineering
³ The suitability of a specific media should be verified with Garlock Applications Engineering
⁴ Specify STRESS SAVER® GYLON® 3505

This is a general guide and should not be the sole means of selecting or rejecting this material. Values do not constitute specification limits.

Nominal Pipe Size (in)	Number of Bolts	Size of Bolts (in)	Minimum Suggested Torque (ft. lbs)	Preferred Torque Range	
				Min. (ft. lbs)	Max (ft. lbs)
0.5	4	0.50	5	9	19
0.75	4	0.50	6	12	23
1	4	0.50	7	14	28
1.25	4	0.50	8	16	32
1.5	4	0.50	10	19	37
2	4	0.63	17	33	66
2.5	4	0.63	23	45	90
3	4	0.63	25	49	97
3.5	8	0.63	15	30	60
4	8	0.63	17	33	66
5	8	0.75	21	41	82
6	8	0.75	23	46	92
8	8	0.75	33	66	132
10	12	0.88	32	64	128
12	12	0.88	47	93	186
14	12	1.00	67	134	268
16	16	1.00	60	120	241
18	16	1.13	66	132	264
20	20	1.13	62	124	249
24	20	1.25	87	173	347

*NOTE 1: Table based on A193 B7 bolts or bolts of equal strength.
*NOTE 2: Garlock does not recommend exceeding the flange manufacturers max. recommended torque.
*NOTE 3: Min Torque value is equal to 300 PSI Compressive stress.
*NOTE 4: Preferred Range creates 600 to 1200 PSI Compressive stress.

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 - » Electronics, semiconductor
 - » Food
 - » Pharmaceutical
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 - » Potable/Drinking water*
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370	✓	

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