

GYLON[®] Style 3504

High performance PTFE gasketing

Description

GYLON[®] Style 3504 is a high performance gasketing material made of multi-layered PTFE for permanent resilience. It is highly compressible and flexible and especially suitable for low-stress components requiring low bolt torque loads, i.e. enameled and plastic flanges, glass tubes, GRP (Glass Reinforced Plastic) and FRP (Fiberglass Reinforced Plastic).



Main Segments

» Food & Beverage
» Pharmaceutical
» Metal Industry
» Petrochemical Industry
» Chemical Industry

Certificates/Declaration*

» FDA
» BAM
» EC1935/2004 incl. EC10/2011
» TA – Luft incl. Blow-out Proof (i.acc. to "old" TA-Luft)
» EN 13555 characteristics (EN 1591-1 calculations i. acc. to "new" TA-Luft)
» Phthalat free
» Silicone free
» ADI free (EMEA 410/01)
» USP Class VI <88>
» USP <87>
» Hydrocheck (Belgaqua)

Key Benefits

» 10 MPa minimum load (150 MPa maximum load)
» Large working range
» Wide temperature range
» Stopped cold flow
» High resilience
» High pressure & vacuum duties
» Excellent chemical resistance**
» Available with inner-/outer eyelet
» Good electrical insulating properties
» Unlimited shelf-life
» Weather and UV resistant

Features*

» Temperature: -268 °C to +260 °C
» Pressure: up to 55 bar
» Shore hardness: D59
» Available Thicknesses: 0.8mm, 1.0mm, 1.6mm, 2.0mm, 3.2mm, 4.8mm, 6.4mm (More thicknesses on request)
» Compressibility (ASTM F36) 25-45%
» Recovery (ASTM F36) 30%
» Fluid Services**: Moderate concentrations of acids, Some caustics, Hydrocarbons, Solvents, Hydrogen peroxide, Refrigerants and Cryogenics
» Filler: Aluminosilicate microspheres

* Depending on product and application details.

** See Garlock resistance table.

Installation Recommendation

Please note the information given below is to ensure a long service life and sealing integrity of your gasket.

1 First check

- » Is the selected material suitable for the application?
Do temperature, pressure and medium agree with the process data?
- » Does the gasket have the correct dimensions regarding thickness, inside and outside diameter for the components?
- » Can the bolts deliver the necessary seating stress to the gasket?
- » Has the bolt torque been correctly calculated?

Garlock will calculate the correct torque levels upon request!

2 Before installation

- » Remove old gasket, and clean flange surface of all debris. For best results, use a metal flange scraper, an aerosol gasket remover and a wire brush, suitable for the flange, then inspect the flange for damage. Be sure surface finish and flatness are satisfactory.
- » Use the thinnest possible gasket. However, flanges that are warped, bowed or severely pitted require thicker gaskets.
- » Whenever possible, on metric flanges, use ring gaskets. Full face gaskets have more surface area, requiring additional compressive load on the gasket.
- » Never use metal-based anti-seize on gaskets, since particles may accumulate in the surface imperfections, thereby creating a flange surface that is too smooth to be effective. Such coatings will also greatly impair the resistance of the gasket pressure.

3 Installation

- » Center the gasket on the flange. This is extremely vital where raised faces are involved.
Note: Standard ANSI ring gaskets, when properly cut, should center themselves when the bolts are in place.
- » Use a torque wrench and well-lubricated fasteners with hardened flat washers to ensure correct initial loading.
- » Tighten bolts to compress gasket uniformly. This means going from side to side around the joint in a star-like crossing pattern.
- » All bolts should be tightened in one-third increments, according to proper bolting patterns.
 - A) initially to 30% of the specified torque
 - B) 2nd step to 70% of the specified torque
 - C) 3rd step to 100% of the specified torque
 - D) 4th step round clockwise with 100% torque
- » We do not recommend retorquing pressurized systems. Retorques should be performed on room temperature (non-pressurized) systems 12-24 hours after initial installation.
- » All applicable safety standards including lockout/tagout procedure should be observed.
- » Never use liquid or metallic based anti-stick or lubricating compounds on the gaskets. Premature failure could occur as a result.

Sealing characteristics in accordance with DIN EN 13555:12-2004

		Test Method	Unit	GYLON® Style 3501-E 2,0 mm	GYLON® Style 3504 2,0 mm	GYLON® Style 3510 2,0 mm	GYLON® Style 3545 2,0 mm
Maximum load during installation $Q_{s\ max}$	20 °C	EN 13555	MPa	230	200	200	180
	150 °C	EN 13555	MPa	180	80	160	100
	200 °C	EN 13555	MPa	180	80	140	80
	250 °C	EN 13555	MPa	140	60	100	60
Minimum load during installation $Q_{\ min\ (L = 0,01)}$	10 bar	EN 13555	MPa	15	7	10	12
	40 bar	EN 13555	MPa	23	13	14	18
	80 bar	EN 13555	MPa	30	20	20	21
Minimum load during operation $Q_{\ s\ min\ (L = 0,01)}$		EN 13555	MPa (10, 20 and 40 bar)	<5, <5, <10	<5	<5	<5
Maximum sealand class $T_{\ p = 20\ ^\circ C, p = 40\ bar}$		EN 13555	L[mg/(s*m)]	1,0x10E-06	1,0x10E-04	1,0x10E-05	1,0x10E-05

(L) = Sealability rate

Note:
Properties/applications shown throughout this brochure are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. For specific application recommendations consult Garlock. Failure to select the proper sealing products could result in property damage and/or serious personal injury. Performance data published in this brochure has been developed from field testing, customer field reports and/or in-house testing. While the utmost care has been used in compiling this brochure, we assume no responsibility for errors. Specifications subject to change without notice. This edition cancels all previous issues. Subject to change without notice GARLOCK is a registered trademark for packings, seals, gaskets, and other products of Garlock.
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