Garlock

# GYLON® Style 3510

## High performance PTFE gasketing

### Description

GYLON® Style 3510 is a high performance gasketing material made of multi-layered PTFE for permanent resilience and has the broadest chemical resistance. GYLON® Style 3510 is the preferred choice for extremely aggressive media including hydrofluoric acid, aluminum fluorides, chlorine/ alkali, caustic potash solutions and electroplating baths.

### Main Segments

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

### Certificates/Declarations*

- » 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, BSE, TSE & ADI free
- » USP Class VI <88>
- » USP <87>

### Key Benefits

- » 20 MPa minimum load (150 MPa maximum load)
- » Higher chemical resistance than 3501-E/3504**
- » 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 83 bar
- » Shore hardness: D75
- » Available Thicknesses: 0.8mm, 1.0mm, 1.6mm, 2.0mm, 3.2mm, 4.8mm, 6.4mm (More thicknesses on request)
- » Compressibility (ASTM F36) 7-12%
- » Fluid Services**: Strong caustics, Moderate Acids, Chlorine, Gases, Water, Steam, Cryogenics, Hydrocarbons fluoride and Aluminum
- » Filler: Barium Sulfate

* 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 $T_{p = 20\ °C,\ p = 40\ bar}$** | | EN 13555 | L[mg/(s*m)] | $1,0x10E^{-06}$ | $1,0x10E^{-04}$ | $1,0x10E^{-05}$ | $1,0x10E^{-05}$ |

(L) = Sealability rate



GARLOCK GMBH
an Enpro Company

Falkenweg 1, 41468 Neuss, Germany
+49 2131 349 0
garlockgmbh@ garlock.com
www.garlock.com