

Garlock Diaphragms



Table of contents

| | |
|---|----------|
| GYLON® PTFE DIAPHRAGMS Your solution for more reliable and longer lived pump and valve diaphragms | 3 |
| GYLON ONE-UP® PUMP DIAPHRAGMS Your solution for sanitary applications in air operated diaphragms | 4 |
| GARLOCK ONE-UP® DIAPHRAGMS Your solution for industrial applications | 5 |
| APPLICATION DATA SHEET ONE-UP®/ GYLON ONE-UP®-Diaphragms | 6 |
| NOTES | 7 |



GYLON® PTFE Diaphragms

Your solution for more reliable and longer lived pump and valve diaphragms

QUALITY, RELIABILITY, CLEANLINESS, STRENGTH AND DURABILITY

No one likes equipment downtime: that’s why we created the most durable, long lasting line of pump and valve diaphragms. From pure PTFE to one-piece bolt on PTFE bonded rubber diaphragms, if you have a difficult or critical application, we have the diaphragm to meet your needs.

Exclusive to Garlock, the GYLON® Style 3522 PTFE Diaphragm material is a time proven product, made using a proprietary process which optimizes quality and uniformity. Using the best available technology this material offers the longest cycle life in the industry, and continues to outperform all competitive materials. With a world class molding facility, we can make products to meet all of your requirements.



TYPICAL APPLICATIONS

- » Metering pumps
- » Dosing pumps
- » Diverting valves
- » Aseptic valves
- » Double diaphragm pumps

REDUCED VOID CONTENT (see Diagram 1)

- » Less permeation
- » Reduced potential for cross-contamination of process media
- » The use of thinner material which reduces material costs and creates energy savings

INCREASED FLEXIBILITY (see Diagram 2)

- » More time between changeovers
- » Decreased labor and documentation costs
- » Improved equipment reliability and life
- » Increased product uptime
- » Energy savings through increased equipment efficiency
- » Protection of downstream equipment

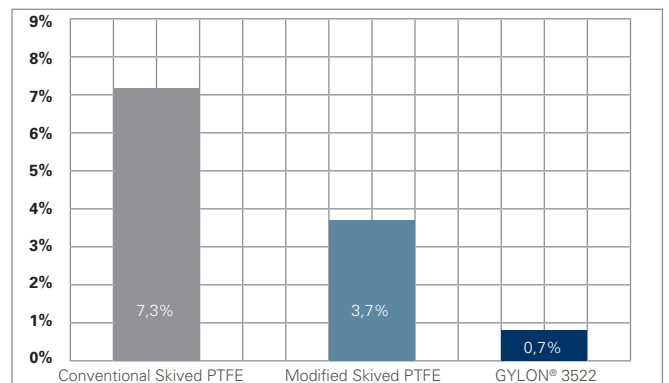
MATERIAL PROPERTIES

- » Compressibility 20-25%
- » Temperature Maximum +500°F (+260°C)
- » Pressure 800psi (55 bar)
- » Recovery 50%

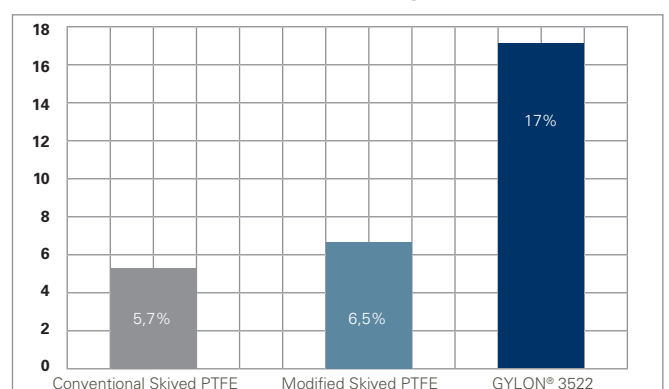
SPECIFICATIONS

- » FDA Regulation 21CFR177.1550
- » 3A Standard
- » USP Class VI Chapter 87 & 88
- » USP Part 31, 281 and 661

Void Content (Diagram 1)



MIT Flex Endurance (ASTM D2176) (Diagram 2)



GYLON ONE-UP[®] Pump Diaphragms

Your solution for sanitary applications
in air operated diaphragm pumps

For years the industrial ONE-UP[®] pump diaphragm has been the first choice for the most demanding industrial applications. We are now introducing the new GYLON ONE UP[®] for the most demanding sanitary applications.

Made using our exclusive GYLON[®] PTFE Diaphragm material and a proprietary EPDM rubber backing, this product is made with the same patented rib construction as our standard industrial ONE-UP[®].

FDA COMPLIANCE

This FDA compliant diaphragm will have the same chemical resistance and long life as the industrial ONE-UP[®], however this diaphragm can be used in food and regulated applications. The GYLON ONE-UP[®] will outperform your current diaphragm; because it is not as abrasive resistant as the industrial ONE-UP[®], we are recommending it for non-abrasive service only.

AVAILABILITY

Available in all of the sizes and pump offerings that the industrial ONE-UP[®] is made: ALMATEC, ARO, DEPA, BLAGDON, FLOTRONICS, GRACO, UNITEC, VERDER, VERSAMATIC, WARREN RUPP, WILDEN AND YAMADA.

EASY INSTALLATION

Made in a one-piece design, this diaphragm is simple to install. Whether it incorporates bolt holes or a perimeter sealing bead, it fits easily into the pump housing without the difficulties associated with installing two-piece diaphragm set.

TYPICAL APPLICATIONS

Air operated diaphragm pumps for food and pharmaceutical applications.



MATERIAL PROPERTIES

- » Temperature Minimum +40°F (+4°C)
- » Temperature Maximum +300°F (+149°C)

SPECIFICATIONS GYLON[®]

- » FDA Regulation 21CFR177.1550
- » 3A Standard
- » USP Class VI Chapter 87 & 88, USP Part 31, 281 and 661

SPECIFICATIONS EPDM

- » FDA Regulation 21CFR177.2600

GARLOCK ONE-UP[®] Diaphragms

Your solution for industrial applications

GUARANTEED TO LAST LONGER

GARLOCK ONE-UP[®] pump diaphragms, containing high performance PTFE sheet on the wetted side, are a significant advancement over conventional PTFE diaphragms. Considerably stronger, with greater flex life, they provide a dramatic improvement in service life: Satisfaction guaranteed!

DURABLE VERSATILITY

Chemical resistance is the property that makes GARLOCK ONE-UP[®] pump diaphragms so versatile. Suitable for use with most chemicals and in elevated temperatures and pressures, these diaphragms are ideally suited for those general service pumps that are likely to be put to one use today and another use tomorrow. You can expect long, effective service life and reduced maintenance costs with these durable one-piece diaphragms. Strength and chemical resistance make GARLOCK ONE-UP[®] pump diaphragms perfect for most of your pumping requirements.

MATERIAL/CONSTRUCTION

» One-piece composite design with a proprietary 100% PTFE on wetted side.

TEMPERATURE RANGE

» Neoprene backing: 14°F to 200°F (-10°C to 93°C)
» EPDM backing: 14°F to 280°F (-10°C to 137°C)
» Viton[®] backing: 32°F to 350°F (0°C to 176°C)

CHEMICAL RESISTANCE

» Chemical resistance to all media in pH 0 – 14 range, except molten alkali metals and elemental fluorine.

FLEX LIFE

» >70 million cycles (ASTM-D-2176, 0.020 inch thick, 0.600 inch wide)

IMPACT STRENGTH

» 30.4 feet pound/inch (ASTM-D-256, 0.220 inch thick)

PHYSIOLOGICAL SAFETY

» FOR INDUSTRIAL USE ONLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

EASY INSTALLATION

» Since the GARLOCK ONE-UP[®] pump diaphragm is a one-piece design, it is simple to install. Whether it incorporates bolt holes or a perimeter sealing bead, it fits easily into the pump housing without the difficulties associated with installing two piece diaphragm set.



KEY FEATURES

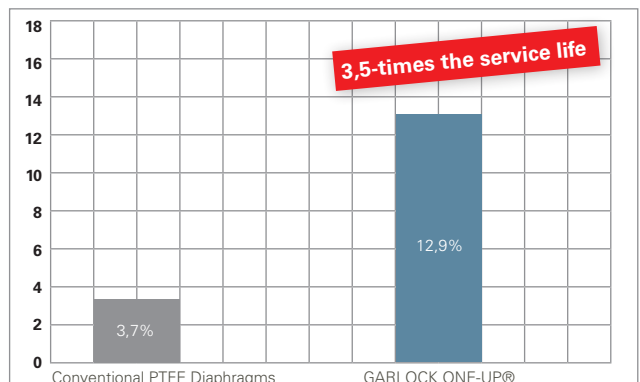
- » Contains high performance PTFE sheet
- » Bonded to a reinforced rubber backing
- » Patented rib construction
- » Chemically inert & temperature resistant
- » Greater flex life
- » Available for most brands of pumps & sizes

KEY BENEFITS

- » Lasts Longer: Replace diaphragms less often
- » Versatility: Diaphragms work with most chemicals
- » Cost: Lowers maintenance and operating costs

FIELD TESTING

- » GARLOCK ONE-UP[®] pump diaphragms have been extensively field tested in a wide variety of industries including chemical processing, paint, solvent and detergent manufacturing, and wastewater treatment.
- » Documented case histories show that the average service life is 3.5 times longer than conventional PTFE diaphragms.





an EnPro Industries family of companies

Application Data Sheet: ONE-UP®/GYLON ONE-UP®-Diaphragms

Name: _____
 Company: _____
 Address: _____
 Phone No.: _____
 E-Mail: _____
 Fax No.: _____

| | | |
|-------------|------------------------------|-----------------------------|
| Date | _____ | |
| Enquiry No. | _____ | |
| Attachment | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Garlock ID: _____

Pump Data

Manufacturer: _____
 Pump type: _____
 Modell No.: _____
 Pump size: _____
 Housing material: Metal Plastic
 Diaphragm material: _____

Operating conditions

Media: _____
 Abrasive: Yes No
 Pressure: _____
 Temperature: _____
 FDA: Yes No

Design, please mark



Flange Connection



PTFE-Flange



Metal-Mounting



Plug-in connection



Corner connector

Diaphragm design

OD: _____ No of bolt holes: _____
 ID: _____ Bolt hole diameter: _____
 Design: _____

GARLOCK GMBH

EnPro Industries family of companies
 Tel: +49 2131 349 0
 Fax: +49 2131 349 222
 www.garlock.com

Garlock Sealing Technologies
 Garlock Rubber Technologies
 GPT
 Garlock PTY
 Garlock do Brasil

Garlock de Canada, LTD
 Garlock China
 Garlock Singapore
 Garlock USA
 Garlock India Private Limited

Garlock de Mexico, S.A. De C.V.
 Garlock New Zealand
 Garlock Great Britain Limited
 Garlock Middle East

Notes

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.
© Garlock Inc 2014. All rights reserved worldwide.

GARLOCK GMBH

EnPro Industries family of companies

Tel: +49 2131 349 0

Fax: +49 2131 349 222

www.garlock.com

Garlock Sealing Technologies

Garlock Rubber Technologies

GPT

Garlock PTY

Garlock do Brasil

Garlock de Canada, LTD

Garlock China

Garlock Singapore

Garlock USA

Garlock India Private Limited

Garlock de Mexico, S.A. De C.V.

Garlock New Zealand

Garlock Great Britain Limited

Garlock Middle East