

PS-SEAL[®] with GYLON[®] Brown-White

The PS-SEAL[®] with the new unitized multi-layer lip material for abrasive food and pharmaceutical applications



PS-SEAL® for abrasive applications

For the special challenges in the food and pharmaceutical industry

In the food and pharmaceutical industry are many applications putting high and special requirements on the lip materials used in shaft seals. In particular, abrasive media like sugar or powder are a major challenge. Not only the media has to be sealed securely during the production process and cleaning cycle, the lip material must also comply with all currently established standards and applicable certificates.

A special challenge in the food and pharmaceutical industry

Abrasive media

- » Crystalline structures such as sugar
- » Powder
- » Grain
- » Other abrasive media



Compliance with common certificates in the pharmaceutical and food and beverage industry

- » EC 1935/2004
- » FDA
- » USP Class VI

The newly developed lip material GYLON® Brown-White Style 3549 with the innovative unitized multi-layer design

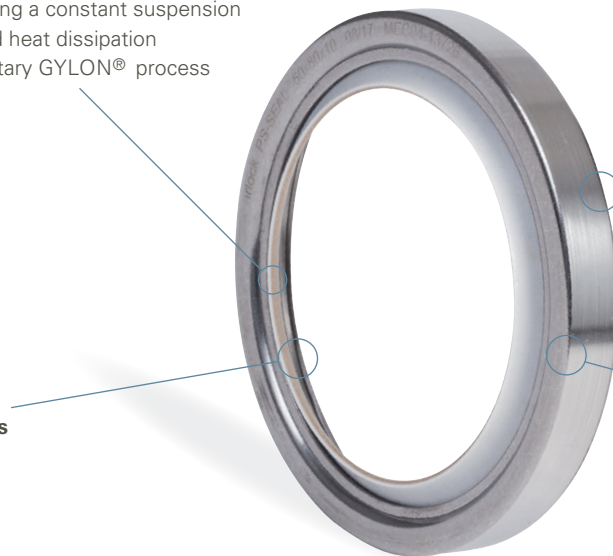
Multi-layer sealing lip

- » Running side: outstanding wear resistance to abrasive media
- » Media facing side: maintaining a constant suspension
- » Media facing side: improved heat dissipation
- » Manufactured using proprietary GYLON® process

Compliance with all major certificates for the pharmaceutical and food and beverage industry

- » EC 1935/2004
- » FDA
- » USP Class VI

Available in different designs and lip configurations



Customized configurations are available on request

The advantages of this PS-SEAL® Sealing Solution

- » Superior wear resistance
- » Can be used in the pharmaceutical and food and beverage industry by providing EC 1935/2004, FDA and USP Class VI
- » Excellent chemical resistance
- » SIP/CIP capability
- » Brilliant dry running characteristics
- » Low friction
- » Proven design for many decades
- » Temperature resistant from -90 °C up to +260 °C
- » Calendered lip material - manufactured by Garlock
- » Applicable in hygienic design
- » Applicable under high pressure and in extreme vacuum
- » Suitable for high circumferential speed

Cost reduction through

- » Longer seal life
- » Lower production downtime

Application examples

- » Mixer
- » Dryers
- » Fillers
- » Stirrer
- » Feeder
- » Pumps

PS-SEAL® with GYLON® Brown-White

Technical Data

Background PS-SEAL®

The product family PS-SEAL® stands for reliable sealing of rotating shafts in particular for

- » High circumferential speeds
- » High pressures
- » Extreme temperatures

Abrasive media is sealed as well as aggressive chemicals. PS-SEAL® with certain lip materials are also suitable for the food and pharmaceutical industries.

Significantly longer seal life

On our specially developed testing bench, highly abrasive media were tested with the Garlock's currently used lip materials for food and pharmaceutical industry (GYLON® White, GYLON® Blue and F-Material) as well as the newly developed GYLON® Brown-White Style 3549. The new lip material showed up to three times longer seal life (see graphic).

Test parameters

- » Dimensions: 40 x 60 x 0,8 mm
- » Pressure: 3 bar
- » Speed: 4 m/s,
- » Media: dry, highly abrasive

Best practice: PS-SEAL® with reversed lip

Due to the reduced dead space, the „reversed lip“ design is primarily used in food and pharmaceutical applications. This can be used up to 5 bar by default (10 and 25 bar designs are available on request).

Technical data PS-SEAL® with GYLON® Brown-White Style 3549

Case

- » By default made from stainless steel 1.4571

Operating pressure

- » Up to 25 bar (depending on design)

Temperature range

- » -90 °C up to +260 °C

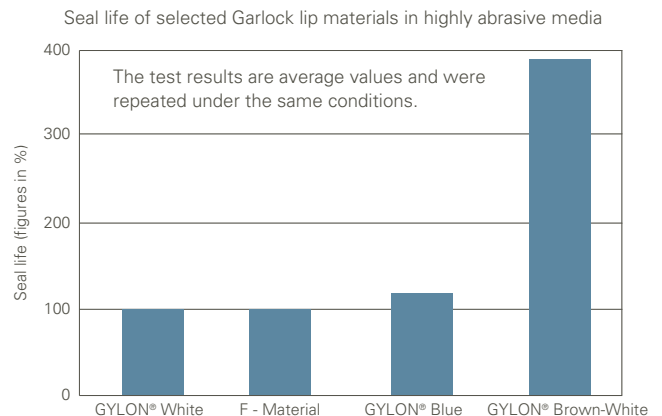
Surface abrasiveness

- » Ra = 0,1 – 0,4 µm
- » Rz = 0,6 – 2,0 µm
- » Rmax = 4 µm

Surface abrasiveness

- » 60 HRC

Garlock will be pleased to supply you with a suitable package of seal and counter face (protection sleeve).



PS-SEAL® with reversed lip design

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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