GORE® SKYFLEX® Aerospace Materials
PX1 Series for Permanent Structure Interfay

ACCELERATE MANUFACTURING PROCESSES & ASSEMBLY TIME WITH DRY SEALANTS

The PX1 Series of GORE® SKYFLEX® Aerospace Materials is a lightweight, dry sealing solution designed primarily to provide interfay corrosion protection of permanent aircraft structure applications (Table 1). These tapes and gaskets accelerate manufacturing processes and assembly time while enabling future drilling techniques, such as one-way assembly (OWA), compared to commonly used form-in-place (FIP) sealants. They are compatible with fillet seals and can be used in applications where fasteners provide very low strain, and a seal is still necessary.

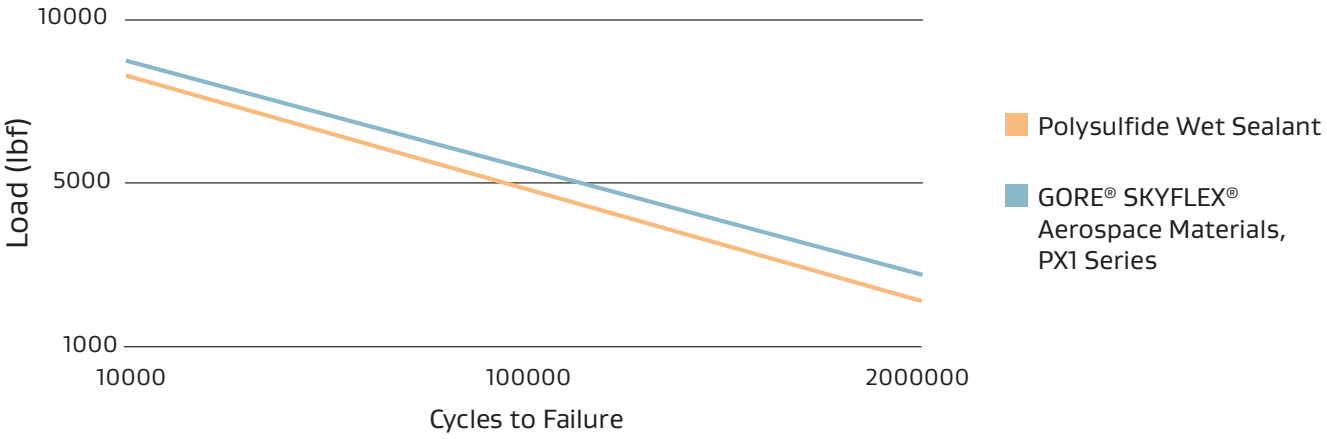
Table 1: Key Material Attributes

Property	Value
Form	Thin-Spool Tape or Pre-Cut Gasket
Material	Expanded PTFE Composite with Adhesive
Shelf Life	2 Years
Cure Time	None
Maximum Gap-Filling Capability	0.2 mm
Compression Near Fastener	< 0.05 mm
Temperature Range	-55 to +120 °C (-67 to +248 °F)
Mechanical Performance	See Figure 1
Corrosion Protection	Proven Success in Salt Fog for 1000 Hours

Typical Applications

- Permanent (primary) structure fuselage joints, including:
  - Ribs
  - Stringers
  - Longitudinal Joints
  - Orbital Joints
  - Brackets
- Joints where fasteners provide low strain and a seal is still necessary

Figure 1: Lap Shear Fatigue Performance of Permanent Joints with Different Interfay Sealants



Reliable Surface & Corrosion Protection

GORE® SKYFLEX® Aerospace Materials, PX1 Series provides reliable, predictable surface and corrosion protection, sealing, and gap-filling. They are proven to maintain fatigue and preload relaxation standards typical of current fay sealing solutions. These tapes and gaskets also create an airtight seal to block the ingress of harsh chemicals, aggressive fluids, harmful gases, and more (Table 2).

Table 2: Additional Material Specifications

Mechanical

Property	Value
Nominal Weight Per Area g/m^2	85
Nominal Uncompressed Thickness mm	0.28
Tape/Gasket Width mm Minimum Maximum	 10 480
Nominal Tensile Strength MPa (ASTM D638 Die V)	4.5
Nominal Elongation to Break % (ASTM D638 Die V)	175
Low-Temperature Flexibility[a] °C (°F)	Passed at -73 (-99)
Nominal Peel Strength on Epoxy-Primed Aluminum Alloy Newton/25 mm	1
Color	White with Blue Adhesive Release Liner

Environmental

Property	Value
Flammability[a] (ABD0031; FAR 25.853)	Passed
Helium Leak Rate[b] (Modified EN 1355) at 1 MPa (mg/m/s)	Easily meets air tight gas leak limit and can achieve values of 1.00E-06
Environmental Regulation/Disposal	Non-curing, non-hazardous with no special waste handling required. Refer to the product safety sheet for more information.

a. Test method details available upon request.

b. Data applicable for single-piece gaskets, dovetail joined gaskets, and overlap joined gaskets.

Fast & Easy installation

The PX1 Series of GORE® SKYFLEX® Aerospace Materials reduces installation steps and simplifies the process to help support manufacturing design goals and decrease downtime. These single-component materials require minimal cleaning and preparation with no mixing, masking, clean up, or cure time — unlike a two-component FIP polysulfide wet sealant. The non-hazardous properties of the PX1 Series also reduce environmental impact and disposal costs, and improve installation safety.

In addition, Gore's materials have a shelf life of up to two years without any storage temperature requirements or needs.

Surface Preparation

Before applying the PX1 Series, ensure that all surfaces are thoroughly cleaned using isopropyl alcohol (IPA) or a similar solvent to ensure strong adhesion of the tape or gasket. Gore recommends using lint-free rags with the solvent to effectively remove dirt, grease, and any residual processing oils. After cleaning, visually inspect all areas to confirm they are free from foreign object debris (FOD), dust, and any other contaminants that could compromise the seal.

Adhesive & Release Liner

After surface preparation, carefully peel away and remove the blue release liner. The adhesive is specifically designed to assist in accurately positioning the material on the substrate and securing it in place. If the tape or gasket is misaligned during placement, it can be gently peeled off and repositioned without causing delamination, ensuring optimal performance in its final location.

Ordering Information

The PX1 Series of GORE® SKYFLEX® Aerospace Materials is available in a thin-spool tape or pre-cut gasket with adhesive. For more information or to discuss your specific aircraft application needs and requirements, contact a Gore representative at **gore.com/skyflex/contact.**

W. L. Gore & Associates, Inc.
gore.com

SKY-1053-DSH-US-AUG24