

Fenlon™ Fabrics for Self-Lubricated Bearings

Save time and money by using maintenance free plain bearings lubricated with Fenlon fabrics

Fenlon™

Specify Fenlon Composite Fabric Lubricants for High Load Low Speed Plain Spherical Bearings.

Fenlon composite fabric lubricants are engineered by integrally weaving together two different surfaces; one PTFE yarn and one non-PTFE yarn. The PTFE yarn acts as a dry lubricant by forming a lubricating boundary layer between the housing and the spherical ball. The non-PTFE surface - which is coated with thermosetting resins - is heat bonded to the housing using light pressure.

Fenlon Advantages over Oils and Greases:

- **High Loads** - Fenlon cured in place composites do not cold flow, unlike oils and greases.
- **Low Friction** - PTFE is known for its release properties, but it is also unique in that its coefficient of friction decreases at high loads.
- **Low Speeds** - Frictional heat builds up as bearing speeds increase. The maximum recommended surface speed is therefore around 150 ft / min (0.76 m/s).
- **Low Stick / Slip** - The static and dynamic coefficients of friction of Fenlon composites are similar, so they are suitable for use in oscillating applications.
- **Wide Temperature Range** - Fenlon composites are solid materials, which unlike liquids do not freeze at low temperatures or evaporate at high temperatures.
- **Maintenance Free** - Fenlon composite become an integral part of the bearing and provide on-demand lubrication throughout the bearing's life.

Additional Benefits Include:

- Excellent chemical resistance
- Durable
- Cost-effective for use in plain bearings

Markets Served:

- Transportation
- Aerospace
- Infrastructure
- Seismic protection
- Energy



Fenlon Typical Physical Properties, General Manufacturing Range and Tolerances:

	Imperial Units	Metric Units
Standard Thickness Range	0.015" - 0.030"	0.38mm - 0.76mm
Standard Loomstate Fabric Widths*	12" - 48"	30.5cm - 122cm
Standard Fenlon Liner Widths*	12" - 48"	30.5cm - 122cm
Standard Roll Length	100 ft	30.5m
Typical Thickness Tolerance	+/- 0.002"	+/- 0.051mm
Standard Width Tolerance	+/- 1"	+/- 25.4mm
Typical Coefficient of Friction	0.10 to 0.03 as load increases beyond 10k psi	0.10 to 0.03 as load increases beyond 69 MPa
Minimum Peel Strengths	2 lbf/in	350 N/m

* Available also in custom widths
Supplied in rolls or cut sheets

Common Fenlon Options:

Product Code	1854-01	2110-13	1861-01
Fabric Composition	Polyester/PTFE	Meta Aramid/PTFE	Fiberglass/PTFE
Thickness	0.017"/0.43mm	0.020"/0.51mm	0.015"/0.38mm
Weight	1.55 oz/sq. ft / 474 gsm	1.85 oz/sq. ft / 565 gsm	1.40 oz/sq. ft / 428 gsm
Best Application	Non-critical automotive and industrial	Aerospace, lends to Type A performance	Extreme and/or sustained temperature demands



For more information, visit us at www.fennerprecision.com