

Toray PTFE Fibers

Continuous Multi Filaments: Standard Grade

Product Benefits

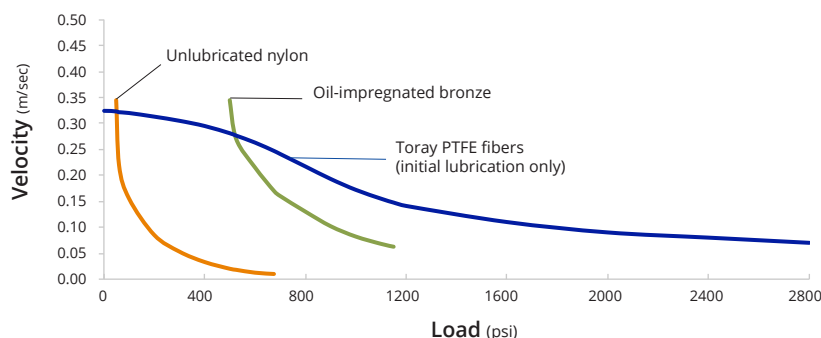
- Toray matrix-spun PTFE fibers for optimum performance
- Multi-filament yarns with a highly even fiber diameter
- Easily used for woven, knitted and winding as diverse processes
- PTFE fibers perform excellently, especially under high-load and low-velocity conditions



Physical Properties

Product	Total Denier (d)	# of Filament (-)	Specifications		
			Denier (dpf)	Tenacity (g/d)	Elongation (%)
Plain	200	30	6.7	2.0	18
	400	60	6.7	2.0	15
	1200	180	6.7	1.7	21
Twisted (up to 6 turns/inch)	400	60	6.7	2.0	15
	1200	180	6.7	1.7	21
	1600	360	4.4	1.4	27

1,000-hour Service Test Comparison of Spherical Bearings of Teflon Fabric vs. Other Materials



Oscillating Test Comparison of Spherical Bearings of Toray PTFE Fabric vs. Steel

	PTFE Fabric	Steel	PTFE Fabric	Steel	PTFE Fabric	Steel
Load, psi (Mpa)	3,000	3,000	16,000	16,000	25,000	25,000
	(21)	(21)	(110)	(110)	(172)	(172)
Arc of Oscillation	60°	60°	60°	60°	60°	60°
Cycles/Min	60	60	6	6	6	6
Total Cycles	1,000,000	1,000,000	65,000	65,000	6,000	-
Lubrication	Initial	Full	Initial	Full	Initial	Full
Remarks	Serviceable	Shaft Scored	Serviceable	Severe Shaft Scoring	Serviceable	Seized at Start Up

Toray PTFE Fibers

Continuous Multi Filaments: Extra Wear-Life Grade

Product Benefits (Compared to Standard Grade)

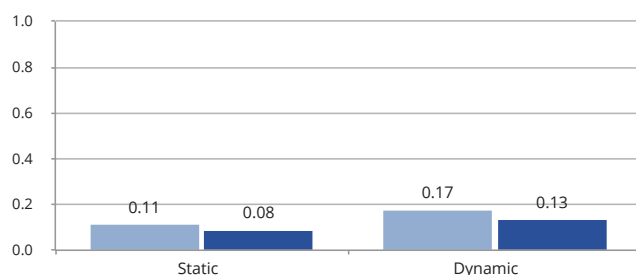
- Same levels of fiber properties
- Same levels of fabric coefficient friction to metal
- 4 times longer life under higher load
- Same levels of fiber coefficient friction to metal
- Same levels of wear rate under low to medium load



Physical Properties

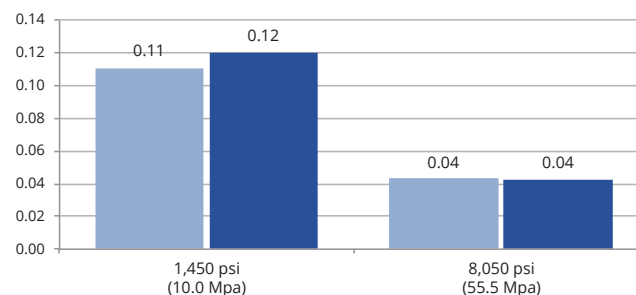
Product	Total Denier (d)	# of Filament (-)	Specifications		
			Denier (dpf)	Tenacity (g/d)	Elongation (%)
Extra Wear-Life Grade	400	60	6.7	1.7	10
Standard Grade	400	60	6.7	2.0	15

Fiber Coefficient Friction (to Matte Finished Metal)



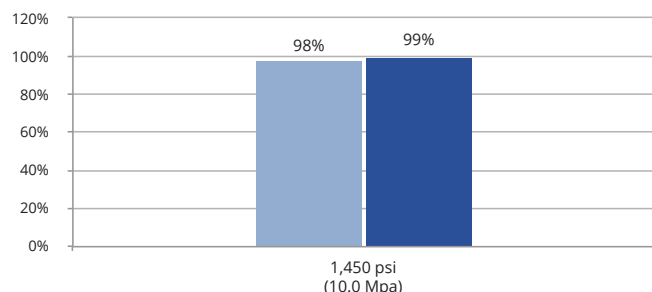
Velocity; Static / Dynamic; 0.00042 / 0.050 m/sec (0.082 / 9.8 ft/min)
Based on ASTM D3108

Fabric Coefficient Friction (to Metal)



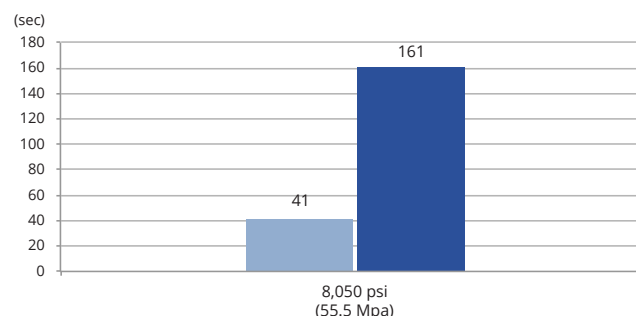
Velocity; 0.016 m/sec (3.2 ft/min), Metal Material; S45C
Based on ASTM D3702

Wear Rate



Velocity; 0.016 m/sec (3.2 ft/min), Metal Material; S45C, 30 minutes
Based on ASTM D3702

Wear Life



Velocity; 0.016 m/sec (3.2 ft/min), Metal Material; S45C
Based on ASTM D3702

Standard Grade Extra Wear-Life Grade

* Extra Wear-Life Grade is under development as of July 2016. Please inquire for product availability.