

**WHY PTFE FIBER?****Key Features**

- Excellent chemical resistance
- Excellent flame resistance
- Excellent UV resistance
- Excellent temperature resistance
- Excellent abrasion resistance

**Disadvantages**

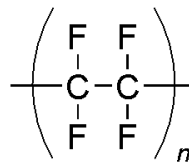
- Low tensile strength
- High elongation
- Low tensile modulus

**FIBER-LINE<sup>®</sup> PROCESS FOR PTFE FIBER**

- Coating
- Twisting
- Precision Winding

**FIBER-LINE<sup>®</sup> PTFE FIBER PRODUCTS**

- Packing Yarns
- High-Performance Rope
- Industrial Fabric Yarn

**Molecular Structure****Chemical Name**

Polytetrafluoroethylene.

**Manufacturer**

Gore, Lenzing, Toray, Other various suppliers.

**History**

PTFE is a synthetic fluoropolymer that was accidentally discovered by Roy Plunkett of DuPont in 1938. In 1941, the polymer was trademarked under the name Teflon<sup>™</sup>. Fibers have been produced from the PTFE polymer since the 1950's.

**Composition**

PTFE fibers are typically produced using two different methods. The first method is matrix-spun, in which the fiber produced is round and brown in color. The second method, referred to as paste-extrusion, produces a flat white finished product. Typically, fibers produced using paste-extrusion have higher tenacity.

**Common Deniers**

Various sizes available.



**PTFE FIBER**

<i>Abrasion Resistance</i>	<i>Ultraviolet (UV) Resistance</i>	<i>Flame Resistance</i>	<i>Chemical Resistance (Acid)</i>	<i>Chemical Resistance (Alkali)</i>	<i>Chemical Resistance (Organic Solvent)</i>	<i>Strength Retention (H<sup>2</sup>O)</i>
✓	✓	✓	✓	✓	✓	✓

**CHEMICAL COMPATIBILITY***Chemical Resistance to Acid: Excellent.**Chemical Resistance to Alkali: Excellent.**Chemical Resistance to Organic Solvent: Excellent.***PTFE FIBER DATA****Standard Modulus**

<i>Property</i>	<i>UOM</i>	<i>Value</i>
<i>Breaking Tenacity</i>	g/d	1.5 - 2.0
<i>Specific Gravity</i>	Ratio	2.10
<i>Elongation @ Break</i>	%	30.0
<i>Tensile Modulus</i>	g/d	5.0 - 15.0
<i>Moisture Regain*</i>	%	0
<i>Creep**</i>	%	N/A
<i>Shrinkage***</i>	%	< 11.0
<i>Melt Point</i>	°C	327
<i>Decomposition Temp.</i>	°C	508

\* Equilibrium moisture regain @ 55% RH    \*\* Creep @ 40%-58% ultimate tensile strength    \*\*\* Shrinkage in dry air @ 177 C for 30 minutes

This data is provided for informational purposes only, and does not constitute a specification. FIBER-LINE® makes no warranty, express or implied, that the product conforms to these values. Contact your FIBER-LINE® representative for exact product details which conform to your specific requirements.

## ABOUT FIBER-LINE®

For over 25 years, FIBER-LINE® has provided science-driven expertise that improves the performance and the end-use processing of high performance fibers. Our products enable the search for new energy reserves and extend the life of fiber optic telecommunication cables. They also add important characteristics, such as SWELLCOAT® water-blocking, water repellence, adhesion, color, and wear and UV-resistance to these and many other applications. We believe that our ongoing commitment to protect the environment, to remain at the forefront of fiber and coating technology, and to 'treat others as we want to be treated' will continue to drive the success of our customers, shareholders, and employees.



### LOCATIONS

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