

FPM™ Porous PTFE Hollow Fiber & Tubing

Markel FPM™ Porous Fiber Solutions

Markel FPM™ (Fluoropolymer Permeable Membrane) Porous Fiber Solutions are a family of PTFE based products that can be used in a wide variety of filtration, separation, and contacting applications. FPM™ Porous Fiber Solutions can be supplied in hollow fiber and tube form, or solid fiber and rod form. Pore size and pore size distribution can be adjusted to meet the membrane flow needs of Ultrafiltration (UF) and Microfiltration (MF) applications in addition to many separation and contacting applications.

Description

FPM™ Porous Fiber Solutions are manufactured by utilizing Markel's leading edge extruded, expanded PTFE technology. This technology enables Markel to offer the broadest range of porous PTFE extruded profiles in the industry. Whether they are manufactured as hollow fibers or tubes, or solid fibers or rods, Markel FPM™ Porous Fiber Solutions are available in a wide range of pore sizes, pore size distributions, diameters and wall thicknesses.

Capability Ranges

- Pores Size Range from 0.005µm up to 20µm
- Porosities up to 65%
- Diameter Range from 0.7mm up to 10mm
- Wall Thickness from 5% to 50% of O.D.

Features

- Highest End Use Temperature of any Polymer
- Outstanding Chemical Resistance
- Exceptionally Hydrophobic
- Can be Rendered Hydrophilic
- Diameters from 700µm to 9.5mm
- Engineering Potting Services Available

Benefits

- Can be used in high temperature applications normally reserved for ceramics
- Ideal for chemically aggressive applications
- Ideal for separating aqueous solutions
- Can be used to filter aqueous solutions
- More surface area means higher throughput, more efficiency
- Designs simplified and time-to-market reduced

Porous Hollow Fiber Material Comparison

	Use Temperature	Chemical Resistance	Durability (Useful Life)	Life Cost/ Membrane Surface Area
PTFE	High	High	Highest	Moderate
PP	Low	Low	Moderate	Low
PS/PES	Moderate	Low	Low	Moderate
PVDF	Moderate	Moderate	Moderate	Moderate
Ceramic	Highest*	Highest*	Low	High

*Potentially limited by potting compound and gasketing

End Use Applications

Markel FPM™ Porous Fiber Solutions can be deployed as a filtration, separation, or degassing media in a number of diverse applications such as:

- Ultra Pure Water Filtration for the Semi-Conductor Market
- Filtration and Degassing for Beverage Markets
- Chemical and Pharmaceutical Filtration, Separation, and Degassing Applications
- Wastewater Filtration

Additional Information

Markel FPM™ Porous Fiber Solutions are available in bulk lengths or can be cut to custom lengths. Spool lengths will vary depending upon product size.

Markel can provide engineering and fiber potting services upon request. The type of potting material and housing material will depend upon the customer's application and needs.