



## FiberFlo FPNN Filters

### All-Nylon Pleated Cartridge Filters

FiberFlo "NN" All-Nylon cartridges are absolute rated. Made with Nylon membrane, cage, core, end caps and support media, the cartridges have high surface area with excellent flow rates per 10 inch length.

Their single-material construction gives them broad compatibility with a wide range of chemicals. The physiological inertness of Nylon makes them suitable for the filtration of a number of chemicals, including Photo Resists, Developers and Solvents

### Standard Features

- Absolute rated
- Long service life
- All Nylon Construction for
- Maximum Chemical Compatibility
- Homogenous high purity media
- Rigorous quality standards
- Integrity testable in the field

### Dependable Performance

FiberFlo "NN" cartridges consist of a nylon membrane with thermally bonded nylon components to provide a very durable product with only one material of construction.

The hydrophilic nylon membrane contains no surfactants or surface wetting agents. Manufactured under QSR, the filters are 100% integrity tested in manufacturing to ensure consistent and reliable performance.

Absolute ratings for FiberFlo "NN" cartridges can be verified in the field by integrity testing using bubble point or diffusional flow testing.

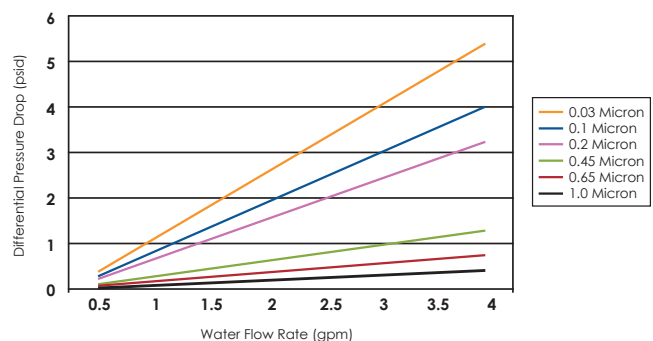
All FiberFlo "NN" cartridges pass USP Class VI plastics tests as well as tests for cytotoxicity, hemolysis and pyrogenicity



### Applications

- Final filtration for chemical distribution
- Photo Resists and Developer
- Plating solution
- Magnetic coating

### Typical Water Flow Rate (per 10" length)



# Technical Data

FiberFlo FPNN Filter Specifications	
<b>Product Specifications</b>	
Filter Media:	Pleated Nylon Membrane
Membrane Support, Core Tube and End Caps:	Nylon
Sealing Technology:	Thermal Bonding
Endotoxins:	Less than 0.5 EU/ml
Biosafety:	All components meet or exceed USP Class VI-121°C plastic tests
FDA Materials:	All components meet the FDA requirements for food contact according to 21 CFR 177-182
Oxidizable Substances:	Filtrate meets or exceeds USP XXI requirements for purified water after 1 liter flush
O-Ring:	Silicone Standard (Other Elastomers available)
O-Ring Color:	Silicone Red (Other elastomers vary)

Recommended Integrity Test	
Pore Size	Diffusional Flow (cc/min @ Test Pressure) per 10" Length
0.03 µm	< 55 @ 60 psig (4.1 bar)
0.1 µm	< 55 @ 48 psig (3.3 bar)
0.2 µm	< 55 @ 35 psig (2.4 bar)
0.45 µm	< 55 @ 20 psig (1.4 bar)
0.65 µm	< 55 @ 15 psig (1.0 bar)
1.0 µm	< 55 @ 8 psig (0.6 bar)

Sanitization / Sterilization	
Hot Water	Hot Water Flush – Up to 90°C
Chemical Sanitization	Standard concentrations of Minncare® Cold Sterilant, hydrogen peroxide and other chemicals.

Maximum Operating Pressure
120 psi (7 bar) at inlet

Cartridge Dimensions	
Nominal Length*	Filtration Area
10 inch	6.5 ft <sup>2</sup> / 0.5 M <sup>2</sup>
20 inch	13.0 ft <sup>2</sup> / 1.0 M <sup>2</sup>
30 inch	19.5 ft <sup>2</sup> / 1.5 M <sup>2</sup>
40 inch	26.0 ft <sup>2</sup> / 2.0 M <sup>2</sup>
Outside Diameter: 2.77 in / 7 cm	
*Actual overall length of cartridge will vary depending on configuration. Cartridge performance is as specified regardless of configuration.	

Maximum Differential Pressure	
Forward Flow	50 p.s.i. (4.1 bar) pressure drop at 68 °F (20 °C)
Reverse Flow	40 psi (2.7 bar) pressure drop

## Product Ordering Information

FiberFlo FPNN Nomenclature Matrix

Pore Size Rating		
003 - 0.03 µm	01 - 0.1 µm	02 - 0.2 µm
045 - 0.45 µm	065 - 0.65 µm	1 - 1.0 µm
Length		
10 - 10 inch	20 - 20 inch	30 - 30 inch
40 - 40 inch		

FPNN - 003 - 20 - A - V

Elastomer		
Blank - Silicone	V - Viton	T - Teflon encapsulated Viton
End Adapter Code		
A - 222/flat	B - 222/fin	C - 226/fin
D - DOE Flat Gasket	E - Internal O-Ring/flat	



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