

# Fulflo® Poly-Mate™ Plus Filter Cartridges

■ Polypropylene

## Pleated Series

### High Surface Area and High Efficiency All-Polypropylene Pleated Cartridges

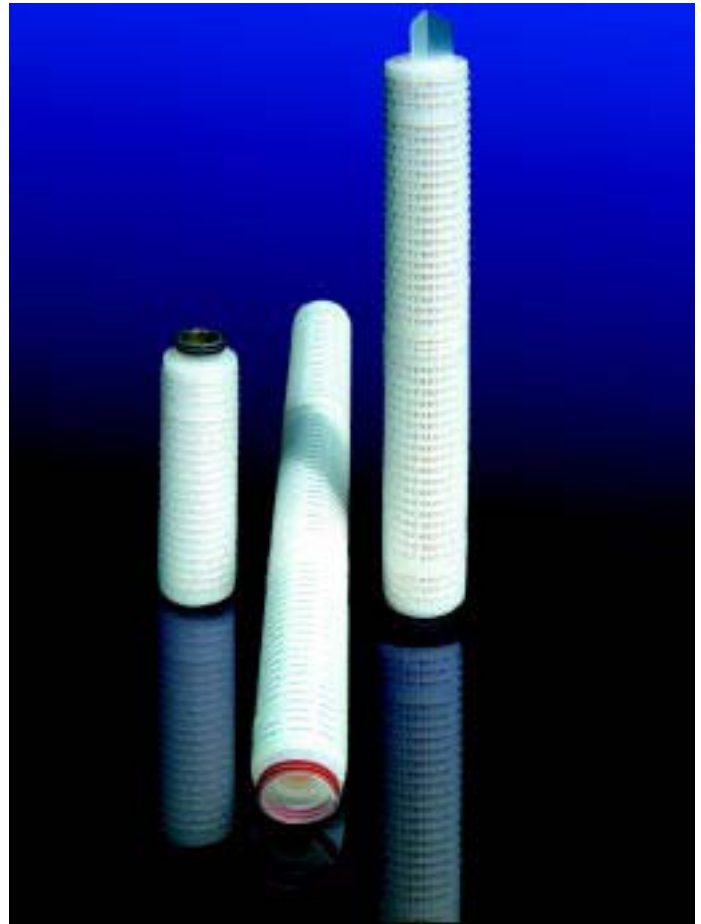
Fulflo® Poly-Mate™ Plus Cartridges, made of pleated polypropylene microfiber, provide high efficiency and high purity filtration. The high efficiency of the Poly-Mate Plus line makes it an ideal membrane prefilter or cost-effective alternative to membrane cartridges in a wide range of applications.

Poly-Mate Plus Pleated Cartridges are available in the following pore sizes:

- 0.25 $\mu$ m
- 0.45 $\mu$ m
- 0.8 $\mu$ m
- 2.0 $\mu$ m
- 3.0 $\mu$ m
- 5.0 $\mu$ m
- 10.0 $\mu$ m
- 30.0 $\mu$ m
- 50.0 $\mu$ m
- 100.0 $\mu$ m

### Markets/Applications

- Chemicals
- Electronic
- Food & Beverage
- Magnetic Media
- Pharmaceuticals
- Cosmetics
- Medical
- Photographic
- DI Water
- Process Water
- Membrane Pre-Filter
- Bottled Water
- Beer & Wine
- Plating Chemicals



### Features and Benefits

- All-polypropylene media and construction meet a broad range of performance requirements.
- One-piece integral construction is 100% bonded for maximum cartridge integrity.
- High surface area design provides superior flow rates and extended service life.
- All media and structural components comply with biological, USP XXI Class VI requirements for plastic and are nontoxic per WI-38 Human Cell Cytotoxicity Test.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- Fixed pore construction provides ultimate particle retention.
- Major end seal options are available to fit most standard vessels.
- Poly-Mate Plus cartridges are non-fiber releasing and ensure consistent quality filtration performance.

## Process Filtration Division



# Pleated Series

## Specifications

### Filtration Ratings:

- 90% at 0.25, 0.45, 0.8, 2, 3, 5, 10, 30, 50 and 100 micrometer pore sizes.

### Materials of Construction:

- Type of Construction: integrally sealed, all-polypropylene pleated media supported by all-polypropylene construction
- Filter Media: melt blown polypropylene microfiber
- Media Support Layers: Non-woven or mesh polypropylene.
- Media Support Core: Heavy wall high strength polypropylene.
- Media Support Cage and Thermally Welded End Caps: Molded polypropylene
- Seal Materials: Buna-N, EPR, Silicone, Viton, PFA Encapsulated Viton

### Dimensions:

- Overall Length: See Bulletin A-700  
SOE fits standard Fulflo vessels with dual sump seats.
- Cartridge Outside Diameter: 2-11/16 in

- Cartridge Inside Diameter:  
DOE: 1-1/16 in  
SOE: 1-5/32 in

### Maximum Recommended Operating Conditions:

- Temperature: 200°F (93°C)
- Temperature @ 35 psid: 160°F (71°C)
- Change Out ΔP: 35 psi (2.4 bar)
- ΔP @ Ambient 70°F (21°C): 70 psi (4.8 bar)
- ΔP @ 200°F (93°C): 20 psi (1.4 bar)
- Flow Rate: 10 gpm (38 lpm) per 10 in length

### Biological Safety/Product Purity:

- Meets USP XXI VI requirements for plastics
- All components FDA listed per CFR, Title 21
- Non-fiber releasing per FDA Part 210.3B (5) and (6)
- Non-photo sensitive

### Liquid Particle Retention Ratings (μm) @ Removal Efficiency of:

Parker	90%	95%	98%	99.90%	99.98%
PMP002	0.30	0.45	0.90	1.6	2.2
PMP004	0.45	0.75	1.4	2.9	3.1
PMP008	0.8	1.5	3.2	8.0	9.2
PMP020	1.7	3.1	8.6	9.5	15.0
PMP030	3.0	4.6	6.1	11.0	12.0
PMP050	5.0	8.4	10.6	12.0	14.0
PMP100	10.0	12.0	15.0	17.0	21.0
PMP300	15.0	24.0	35.0	44.0	52.0
PMP500	50.0	56.0	62.0	68.0	71.0
PMP1000	100.0	109.0	117.0	126.0	138.0

Performance determined per ASTM/F-795-88. Single-Pass Test using AC Test Dust in water at a flow rate of 2.5 gpm per 10 in cartridge (9.5 lpm per 254mm).

## Ordering Information

<b>PMP</b>	<b>030</b>	<b>10</b>	<b>A</b>	<b>N</b>	<b>DO</b>	<b>B</b>
Cartridge Code	Particle Removal Rating (μm)	Nominal Length (in)	Support Construction	Seal Material	End Cap Configuration	Special Options
PMP = Poly-Mate Plus	002 = 0.25 004 = 0.45 008 = 0.8 020 = 2 030 = 3 050 = 5 100 = 10 300 = 30 500 = 50 1000 = 100	4 = 4 10 = 9 13/16 20 = 19 15/16 30 = 30 1/16 40 = 40	A = Natural Polypropylene (All support components)	E = EPR N = Buna-N S = Silicone T = PFA Encapsulated Viton* (O-ring only) V = Viton*	AR = 020 O-Ring/Recessed Cap DO = Double Open End (DOE) DX = DOE With Core Extender LL = 120 O-Ring/Recessed Cap LR = 120 O-Ring/Recessed Cap PR = 213 O-Ring/Recessed Cap SC = 226 O-Ring/Cap SF = 226 O-Ring/Fin TC = 222 O-Ring/Cap TF = 222 O-Ring/Fin	No Symbol = No Option B = Bubble-Point Test R = DI Water Rinse (5 minutes) Z6 = Individual Poly Bag only

### Poly-Mate Plus Cartridge Flow Factors (psid/gpm @ 1 cks)

Rating (μm)	Flow Factor
0.25	0.0900
0.45	0.0530
0.8	0.0290
2	0.0068
3	0.0060
5	0.0048
10	0.0040
30	0.0030
50	0.0025
100	0.0020

### Poly-Mate™ Plus Length Factors

Length (in)	Length Factor
4	0.4
10	1.0
20	2.0
30	3.0
40	4.0

### Flow Rate and Pressure Drop Formulas:

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

### Notes:

- Clean ΔP** is PSI differential at start.
- Viscosity** is centistokes. Use Conversion Tables for other units.
- Flow Factor** is ΔP/GPM at 1 cks for 10 in (or single).
- Length Factors** convert flow or ΔP from 10 in (single length) to required cartridge length.

\* A trademark of E. I. duPont de Nemours & Co.

For pleated cartridge configurations and dimensions, see Bulletin A-700 in the Appendix.

## Process Filtration Division

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