

C-1620

# Fulflo® ProBond™ Filter Cartridges

## A Patented Breakthrough in Resin Bonded Cartridge Design

Parker ProBond™ cartridges have a unique, proprietary two-stage filtration design to maximize particle retention and service life in viscous fluid filtration applications. An outer, spiral, prefilter wrap, made from a fiber blend of polyester and acrylic, increases cartridge strength and eliminates residual debris associated with conventional or machined and grooved, resin bonded cartridges.

ProBond filter cartridges are available in eight differentiated removal ratings of 2µm, 5µm, 10µm, 25µm, 50µm, 75µm, 125µm and 150µm pore sizes to meet a wide range of performance requirements.

## Benefits

- Outer, spiral wrap collects large particles and agglomerates, while inner layers control particle removal at rated size
- Outer wrap increases surface area and eliminates loose debris and contamination caused by machined products
- Extra-long acrylic fibers provide added strength, resist breakage and migration common with competitive “short fiber” cartridges
- Available with optimal single-open-end seals (222 o-ring with flat cap) in ABS or nylon



- Phenolic resin impregnation strengthens cartridge for use with high viscosity fluid
- Withstands pressure surges up to 150 psid across cartridge (depending on fluid temperature)
- One-piece construction eliminates bypass concerns with multilength cartridges and eases change out
- Silicone-free construction ensures no contamination to adversely affect adhesion properties of coatings

## Applications

- Paints
- Printing Inks
- Adhesives
- Resins
- Emulsions
- Chemical Coatings
- Organic Solvents
- Plasticizers
- Waxes
- Oilfield Fluids
- Process Water
- Petroleum Products



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# Fulflo® ProBond™ Filter Cartridges

## Specifications

### Materials of Construction:

- 1st stage Pre-filter wrap: Polyester/Acrylic long staple fiber blend
- 2nd stage Final Filter wrap: Acrylic long staple fiber
- Fibers impregnated with Phenolic Resin

### Type of Construction:

- Coreless, one-piece, rigid resin bonded fibrous matrix

### Maximum Recommended Operating Conditions:

- Flow Rate: 5 gpm per 10 in length (18.9 lpm per 254 mm length)
- Temperature: 250°F (121°C)
- Maximum Recommended Change Out ΔP: 50 psid (3.5 bar)
- Recommended Maximum Differential Pressure:
- Cartridge Pressure Resistance:**
  - 150 psid (10 bar) @ 70°F (21°C)
  - 125 psid (8.6 bar) @ 100°F (38°C)
  - 90 psid (6.2 bar) @ 150°F (65°C)
  - 65 psid (4.5 bar) @ 180°F (82°C)
  - 25 psid (1.7 bar) @ 250°F (121°C)

### Particle Removal Ratings:

- 2μm, 5μm, 10μm, 25μm, 50μm, 75μm, 125μm and 150μm

### Dimensions, in (mm):

- Outside Diameter: 2-9/16 in (65)
- Inside Diameter: 1-1/8 in (28.6)
- Lengths: Nominal, 10, 20, 30 and 40 in lengths

### Environmental/Chemical Compatibility:

- Classified as a nonhazardous material
- Incinerable (8000 BTU/lb)
- Crushable and shreddable
- Certified silicone-free
- Suitable for weak acids and bases (pH 5-9)
- Unsuitable for oxidizing agents
- Not recommended for FDA applications

### End Adapters:

- None on double open end style
- ABS (Acrylonitrile Butadiene Styrene) for most applications
- Nylon (NTC) for aromatic solvents

### ProBond Flow Factors

Rating (μm)	Flow Factors
2	0.08
5	0.04
10	0.02
25	0.012
50	0.01
75	0.006
125	0.0013
150	0.0010

### ProBond Length Factors

Length (in)	Length Factor
9	1.0
10	1.0
19	2.0
20	2.0
29	3.0
30	3.0
39	4.0
40	4.0

### Flow Rate and Pressure Drop Formulas

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

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

- 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.

## Ordering Information

Cartridge Code	Micron Rating (μm)	Length	End Cap Configurations	Seal Material
PRO = ProBond Series	2 5 10 25 50 75 125 150	(code) (in) (series) 9 9-3/4 248 10 10 254 19 19-1/2 495 20 20 508 29 29-1/4 743 30 30 762 39 39 961 39 39 991 40 40 1016	Omit = Standard DOE (coreless) CXC = Extended Tinned Steel Core C = Tinned Steel Core NTC = Single Open End 222 O-ring/Flat Cap (Nylon) OB = Std. Open End/Polypro Spring Closed End TC = Single Open End XA = 222 O-Ring/Flat Cap (ABS Plastic) XB = Poly Extender Ext. Core Open End/Polypro Spring Closed End	Omit = DOE and XA E = EPR N = Buna-N S = Silicone (O-Ring only) T = PFA Encapsulated Viton* (222, 226 O-Ring Only) V = Viton* W = Poly Foam Gaskets

Specifications are subject to change without notification.

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SPEC-C1620-Rev. A 01/08



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