

A Patented Breakthrough in **Resin Bonded Cartridge Design**

Parker ProBond™ cartridges have a unique, proprietary* two-stage filtration design to maximize particle removal and service life in viscous fluid filtration applications. An outer, spiral, prefilter wrap increases cartridge strength and eliminates residual debris associated with conventional, machined, resin bonded cartridges.

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

Applications

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

Features and 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 oring with flat cap) in ABS or nylon.



Acrylic/Phenolic

Bonded Depth Series



- Phenolic resin impregnation strengthens cartridge for use with fluid viscosities up to 15,000 SSU (3200 cks).
- 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.

Process Filtration Division



Bonded Depth Series

Specifications

Materials of Construction:

Acrylic, long staple fiber; phenolic bonding resin

Type of Construction:

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

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

End Adapters:

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

Maximum Recommended Operating Conditions:

- Flow Rate: 10 gpm per 10 in length (38 lpm per 254 mm length)
- Temperature: 250°F (121°C)
- Change Out ΔP : 50 psid (3.5 bar)
- 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)

Environmental/Chemical Compatibility:

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

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

ProBond Flow Factors (psid/gpm @ 1cks)

Rating <i>(μm)</i>	Flow Factor
2	0.08
5	0.04
10	0.02
25	0.012
50	0.01
75	0.006
125	0.0013
150	0.0010

Flow Rate and Pressure Drop Formulae:

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

Clean $\Delta P = Flow Rate x Viscosity x Flow Factor$

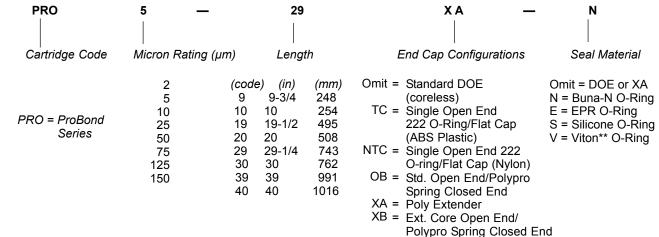
Length Factor

Notes:

- 1. Clean ΔP is PSI differential at start.
- 2. **Viscosity** is centistokes.
- Use Conversion Tables for other units.

 3. Flow Factor is ΔP/GPM at 1 cks for 10 in (or single).
- 4. **Length Factors** convert flow or ΔP from 10 in (single length) to required cartridge length.

Ordering Information



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^{*} U.S.Patent No. 5,639,370

^{**} A trademark of E. I. duPont de Nemours & Co.