

PROBOND™ FILTER CARTRIDGES FOR PAINT, RESINS, PRINTING INKS AND POLYMERS

Leaflet E-05-01 UK



FLUXA

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S.p.A.

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A Patented Breakthrough in Resin Bonded Cartridge Design

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 other, machined, resin bonded cartridges.

ProBond filter cartridges are available in eight differentiated removal rating from 2µm through 150 µm to meet a wide range of performance requirements.

Applications

- Paints
- Printing Inks
- Adhesives
- Resins
- Polymers
- 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 without machining. Eliminates loose debris and contamination caused by machined products.
- Extra-long acrylic fibers provide added strength, resist breakage and migration common in competitive “short fiber” cartridges.
- Phenolic resin impregnation strengthens cartridge for 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 on multilength cartridges and eases change out
- Silicone-free construction ensures no contamination to effect adhesion properties of coatings.

Specifications

Materials of Constructions:

- Acrylic, long staple fiber; phenolic bonding resin

Type of Construction:

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

Particle Removal Ratings:

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

Dimensions, (mm):

- O.D. : 65 mm
- I.D. : 28,6 mm
- Lengths: 9.75" (247 mm), 10" (254 mm), 19.5" (495 mm), 20" (508 mm), 29.25" (743 mm), 30" (762 mm), 39" (991 mm), 40" (1016 mm)

Operating Conditions:

- Maximum Recommended Flow Rate: 18,9 lpm per 10" increment
- Max. Recommended Temperature: 121°C
- Recommended Changeout Pressure: 3,5 bar
- Cartridge Pressure Resistance:
 - 10 bar @ 21°C
 - 8,6 bar @ 38°C
 - 6,2 bar @ 65°C
 - 4,5 bar @ 82°C
 - 1,7 bar @ 121°C

Environmental/Chemical Compatibility:

- Classified as a nonhazardous material
- Incinerable (8000BTU/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

Flow Rate and Pressure Drop Formulae:

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

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

Notes:

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 for 10 in (single length) to required cartridge length.

ProBond™ Flow Factors

(psid/gpm @ 1 cks)

Rating (μm)	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

Ordering Information

PRO	5	29		
PRO BOND™	Rating Code	Length Code	Inches	(mm)
	2	9	9,75	(247)
	5	10	10	(254)
	10	19	19,5	(495)
	25	20	20	(508)
	50	29	29,25	(743)
	75	30	30	(762)
	125	39	39	(991)
	150	40	40	(1016)

