

PORFLUX I

Description

PORFLUX I pleated filter cartridge filters are designed for application where high flow rate and precise particles removal rating is required. This filters which is designed with 83mm out diameter have two times more filtration area comparison with normal filters. Highly recommended for PDP, LCD, AM-OLED(Active Matrix Organic Light-Emitting Diode), etc.



Features

- Suitable for 6~7 generation LCD
- Suitable for mass particle interception & large capacity processes
- Thermal bonding
- Free of surfactants, binders and adhesives
- Manufactured in clean room environment (class 1,000)

Applications

Electronic Industry	LCD, PDP, AM-OLED, photo-resist, etchant, developer, stripper
Film & Fiber Industry	Monomer, slurry additive, floppy disc coating, computer tape coating, audio and videotape
General Process Industry	Adhesive, automotive paint, Ink and dye, acid, base, and oxidant
Chemical & Petrochemical Industry	Monomer, polymer, glycol, mono-ethanol-amine and di-ethanol-amine for gas scrubbing, acid, base and product polishing, rinse and solvent
Pharmaceutical & Biological industry	Ointment, pure water for dialysis, diagnostic, LVPs, SVPs, tissue culture media, extraction chemicals, re-crystallization chemical, serum
Food & Beverage Industry	Corn syrup, edible oil, bottle water, beer, soft drink and distilled spirits, wine, beer, fruit Juice
General Water Process	DI water , process water
Gases Industry	Tank vents, compressed gases, sterile venting of holding tanks, sterile CO ₂

Specifications

Dimension & Structure	Length ID OD Effective filtration area	10" inch / 240 mm (nominal) 38 mm 83 mm PP : 0.6 ~ 1.2 m ² , PES : 0.8 ~ 1.0 m ² , PTFE : 0.9 ~ 1.48 m ²
Materials of Construction	Filtration media Support layers Core & case O-rings	Polypropylene, PES, PTFE, PP membrane, Fiber glass Polypropylene, polyester Polypropylene Silicone, EPDM , Viton, TEV
Operating Conditions	Maximum differential pressure Maximum operating temperature	30 psid / 2.1 bar at 60 °C 60 psid / 4.2 bar at 30 °C 176 °F / 80 °C

Liquid Particle Removal ratings

Polypropylene micro fiber	Absolute : 0.6, 0.8, 1, 5, 10, 20 Nominal : 0.2, 0.45, 1, 3, 5, 10, 30
PES Membrane	0.04, 0.1, 0.2, 0.45, 0.6, 0.8, 1.2
PTFE Membrane	0.05, 0.1, 0.2, 0.45, 0.7, 1, 3, 5
PP Membrane	0.1, 0.2
Fiber glass	0.45, 1, 5, 10

(Polypropylene nominal)

Removal Rating (μm)	$\beta = 1,000$ 99.90 %	$\beta = 100$ 99.00 %	$\beta = 10$ 90.00 %
0.2	2.0	< 0.86 *	< 0.22 *
0.45	4.2	2.1	< 0.85 *
1	9	3.7	< 0.78 *
3	13	7.2	2.84
5	22	11.5	4.6
10	30	15.3	8.7
30	41.71	32	28

* Extrapolated value

Bubble Point for 10 inch Cartridge (Single layer) - PES membrane

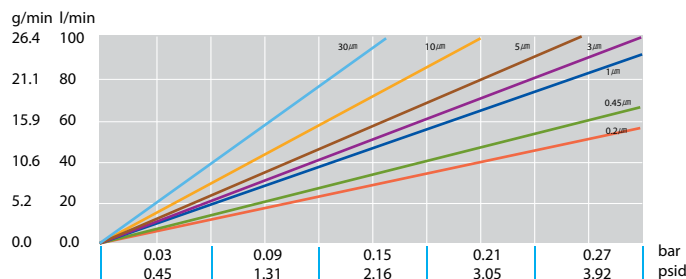
Pore size (μm)	0.04	0.1	0.2	0.45	0.6	0.8	1.2
Bar	> 2.1	> 1.8	> 3.3	> 2.1	> 1.4	> 0.9	> 0.75
Psi	> 30.4	> 26.0	> 47.8	> 30.4	> 20.2	> 16.5	> 10.8
Measured	In IPA			In Water			
Retention of bacteria (log.red.value)	6			6			
Bacteria	Acholeplasma laid lawii		Brevundimonas diminuta	Serratia marcescens	Sacch cerevisiae		

Bubble Point for 10 inch Cartridge (Single layer) - PTFE membrane

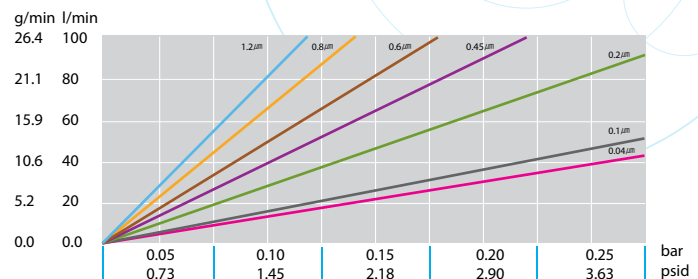
Pore size (μm)	0.05	0.1	0.2	0.45	0.7	1.0	3.0	5.0
Bar	> 2.0	> 1.4	> 1.1	> 0.3	> 0.25	> 0.2	-	-
Psi	> 28.9	> 20.2	> 15.9	> 4.3	> 4.1	> 2.9	-	-
Measured	In IPA							
Retention of bacteria (log.red.value)	11		11	11	11			
Bacteria	Acholeplasma laid lawii		Brevundimonas diminuta	Serratia marcescens	Sacch cerevisiae			

Pressure Drop vs. Water Flow Rate

(Polypropylene nominal)



(PES membrane)



(PTFE membrane)

