

Clariflow® II Biological

Membrane Filter Cartridges



Low Protein-Binding PES Membrane with Superior Fluid Flow Rates

Clariflow® II-Biological Grade cartridges have been developed and optimised to assure end-product purity and stability in the filtration of water, buffers, culture media, biologicals and other solutions used in the pharmaceutical industry.

Clariflow® II's polyethersulfone membrane is inherently hydrophilic and therefore does not require the addition of wetting agents. This results in lowering extractable as well as compatibility with a wide range of chemicals across the pH range - including many organic solvents. The PES membrane also exhibits low protein-binding characteristics; is biologically inert and bacterial retentive.



Applications:

- Pharmaceutical
- Intermediates
- Bacterial Growth Media
- Parenteral Solutions
- Reagent Chemicals
- Make-Up Water
- Vaccines

Product Features:

- Faster processing of batches
- Qualitative bacterial retention reduces initial bioburden
- Non-pyrogenic for use in critical applications
- Long service life minimises change-out frequency
- Maximises product yields
- Each cartridge is fabricated in a clean room environment, pre-flushed with ultra pure deionised water and 100% integrity tested prior to shipment.



Clariflow® II Biological

Specifications

Materials of Construction

Membrane: Polyethersulfone
 Membrane Support: Polyester
 Structural Components: Polypropylene
 End Caps: Nylon

Recommended Operating Conditions

Max Temperature: 70°C @ 2.0 bar
 Max Pressure Forward: 5.0 bar @ 20°C
 4.0 bar @ 40°C
 3.0 bar @ 50°C
 Max Pressure Reverse: 2.0 bar @ 20°C

Integrity Test

Bubble Point
 (60/40 IPA/Water at 25°C)
 0.1µm: > 3.38 bar
 0.2µm: > 2.48 bar
 0.45µm: > 1.33 bar
 0.65µm: > 1.10 bar
 0.80µm: > 0.72 bar

Dimensions

OD: 68mm
 ID: 26.9mm
 Surface Area: 0.5 m²

Cleaning and Sterilisation

Clariflow® II-Biological Grade can be repeatedly in-situ steam sterilised or autoclaved at up to 130°C. They can be sanitised with hot water at up to 90°C and are compatible with a wide range of chemicals.

Divisional Flow Test Pressure (Flow < 16 ml/min)

0.1µm: > 2.8 bar
 0.2µm: > 1.7 bar
 0.45µm: > 1.0 bar
 0.65µm: > 0.8 bar
 0.80µm: > 0.6 bar

Retention Characteristics

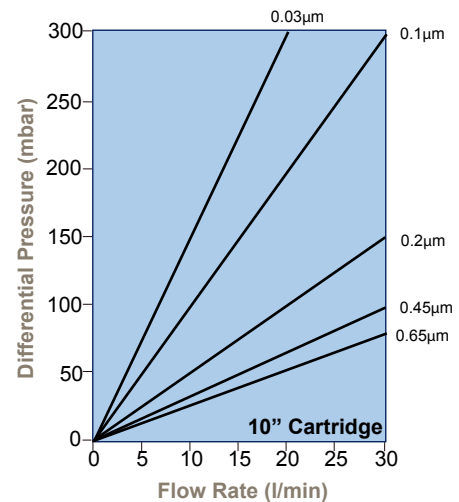
Clariflow® II-Biological Grade filters typical titre reduction values shown have been established using challenge methodology based on ASTM F838-05.

Test Organism	Approx Cell Size (µm)	Micron Rating			
		0.10	0.20	0.45	0.65
Archoleplasma laidlawii	0.08	>10 ⁶	>10 ⁴	-	-
Brevundimonas diminuta	0.30	>10 ¹⁰	>10 ⁴	>10 ²	-
Serratia marcescens	0.5	>10 ¹²	>10 ¹⁰	>10 ⁴	>10 ⁴
Leuconostoc oenos	0.5	>10 ¹²	>10 ¹²	>10 ⁸	>10 ⁵

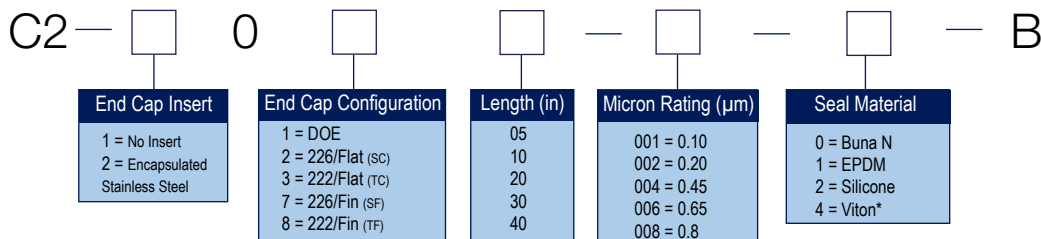
Flow Factor Table**

Clariflow II Biological	0.1µm	0.2µm	0.45µm	0.65µm
Flow factor (mbar / l/min @ 1cP)	15.152	9.091	6.250	4.348

Flow rate vs. ΔP (1 cps liquid @ 23°C)



Ordering Information:



* - Trademark of E.I. duPont de Nemours & Co.

** - Flow factor required for sizing. Refer to page 62 for further information

