

# 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 m<sup>2</sup>

### 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.

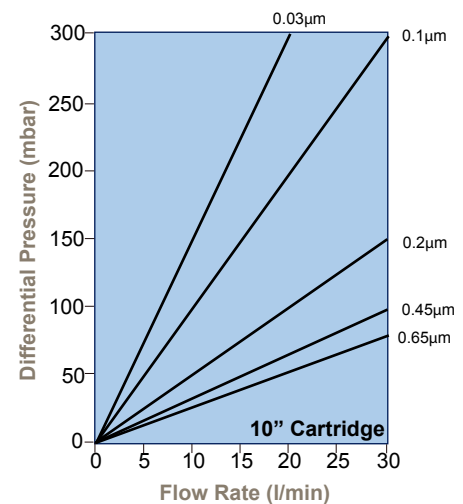
Test Organism	Approx Cell Size (µm)	Micron Rating			
		0.10	0.20	0.45	0.65
Archoleplasma laidlawii	0.08	>10 <sup>6</sup>	>10 <sup>4</sup>	-	-
Brevundimonas diminuta	0.30	>10 <sup>10</sup>	>10 <sup>4</sup>	>10 <sup>2</sup>	-
Serratia marcescens	0.5	>10 <sup>12</sup>	>10 <sup>10</sup>	>10 <sup>4</sup>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

### Flow Factor Table\*\*

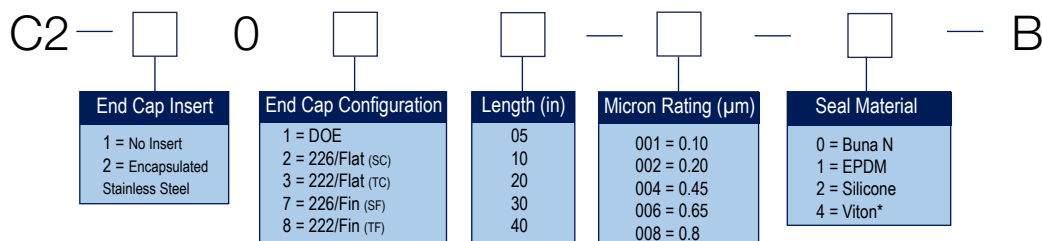
Clariflow II Biological	0.1µm	0.2µm	0.45µm	0.65µm
Flow factor (mbar / l/min @ 1cP)	15.152	9.091	6.250	4.348

### 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



PROSEP FILTER SYSTEMS LTD  
Unit G19  
River Bank Way  
Lowfields Business Park  
Elland  
West Yorkshire  
HX5 9DN

**Tel: 01422 377367**

**Fax: 01422 377369**

Email: [enquiries@prosep.co.uk](mailto:enquiries@prosep.co.uk)

[www.prosep.co.uk](http://www.prosep.co.uk)

**Map and Directions to Prosep Filters Limited**



Leave M62 at Junction 24.

At roundabout adjacent to Cedar Court Hotel take 2nd exit onto dual carriageway (A629), signposted Halifax.

Take 1st exit slip road.

At roundabout at end of sliproad, take 3rd exit off.

This is the entrance to Lowfields Business Park.

Proceed straight over 1st roundabout.

At next roundabout take 2nd exit onto River Bank Way - Prosep Filters can be found on the left after the S-bend.

[Link to Google Maps](#)