

Biofil™ 1

Polyethersulfone Membrane Cartridge Filters



Porvair Biofil^{IM} 1 cartridges utilise a single layer of polyethersulfone (PES) membrane, providing a filter with effective bioburden retention properties to support the manufacture of food and beverage products.

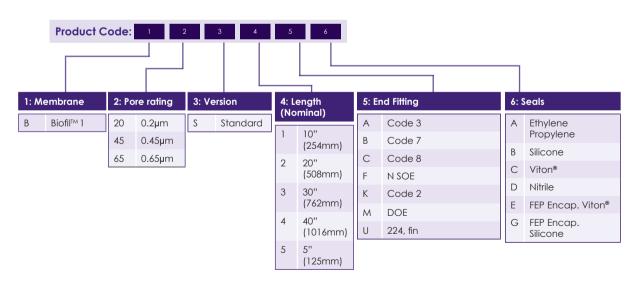
The inherently hydrophilic and asymmetric nature of the PES membrane facilitates high flux rates and enhances the wettability characteristics of the cartridges.

By combining this membrane with quality all-polypropylene support components and high integrity manufacturing techniques, Biofil[™] 1 filter cartridges are ideally suited to the most demanding process conditions.

Typical Applications

- Beverages
- Mineral Water
- Pure water supply

Ordering Information



Features and Benefits

- · Guaranteed microbial ratings
- Excellent hydrolysis resistance
- · Excellent chemical compatibility
- · Suitable for steam sterilising
- Full traceability
- · Controlled manufacturing environment

Specifications

Materials of Manufacture

Filter membrane: Polyethersulfone Membrane support: Polypropylene Irrigation mesh (support): Polypropylene Drainage layer: Polypropylene Inner core: Polypropylene Polypropylene Outer support: End fittings: Polypropylene Support ring: Stainless steel

All polymeric materials used in the manufacture of BiofilTM 1 are FDA CFR 21 & EC 10/2011 compliant.

Cartridge Dimensions (Nominal)

Effective Filtration Area: 0.6m² (6.5ft²)

(per 10" module)

Diameter: 70mm (2.8")

Length: 1 module: 254mm (10")

2 modules: 508mm (20") 3 modules: 762mm (30") 4 modules: 1016mm (40")

Gaskets and O-Rings

FDA approved Ethylene Propylene, FEP encapsulated, Silicone, Viton® or Nitrile.

Maximum Differential Pressure

Normal flow direction at:

20°C (68°F): 5.0bar (73psi) 80°C (176°F): 2.4bar (35psi)

Reverse flow direction at:

20°C (68°F): 3.0bar (44psi)

Operating Temperature

Maximum continuous: 80°C (176°F)

Sterilisation

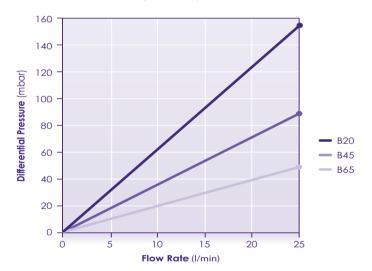
In situ steam 50 x 30 minute cycles at 135°C (275°F) Hot water 100 cycles at 90°C (194°F)

Integrity Testing

Each Biofil[™] 1 module of every cartridge is individually integrity tested, which correlates to the HIMA and ASTM F838-20 bacterial challenge tests. Non-destructive integrity tests, such as Pressure Hold, Diffusive Flow and Bubble Point, can be performed by customers. Please contact us for procedural detail.

Clean Water Flow Rates

 A 254mm (10") Biofil™ 1 single cartridge exhibits the flow-**∆**P characteristics indicated below, for solutions with a viscosity of 1 centipoise.



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