Description
SepraPor® XFMM40 is a tangential flow filtration (TFF) cartridge containing hollow fiber membranes. It is ideal for use in a variety of biopharmaceutical applications including cell concentration, high productivity harvest, and continuous cell culture perfusion. This TFF cartridge is available in a range of sizes from bench through production scale for ease of scalability. The SepraPor® filter cartridge is 100% integrity tested during manufacture and meets the critical demands of the pharmaceutical, biotechnology, and related industries.

Materials of Construction
All components of the filter are animal component free (ACF). These materials are listed for food contact use in the Code of Federal Regulations (CFR), Title 21, as below:

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
<th>CFR Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hollow fibers</td>
<td>Polysulfone</td>
<td>21, 177.1655</td>
</tr>
<tr>
<td>Fiber bundle netting</td>
<td>Polypropylene</td>
<td>21, 177.1520</td>
</tr>
<tr>
<td>Outer sleeve</td>
<td>Polysulfone</td>
<td>21, 177.1655</td>
</tr>
<tr>
<td>Fiber encapsulation</td>
<td>Epoxy</td>
<td>21, 175.300</td>
</tr>
<tr>
<td>O-rings</td>
<td>Silicone</td>
<td>21, 177.2600</td>
</tr>
</tbody>
</table>

Retention Rating
0.4 μm

Typical Fiber Lumen
1.0 mm

Typical Fiber Outer Diameter
1.5 mm

Fluid Path Length (Nominal)
12 in (30 cm)
24 in (60 cm)

Bubble Point Range
9 – 17 psi (0.6 – 1.2 bar) in 60% IPA / 40% water

Minimum Permeate Flux
7,500 LMH/bar (Liters/m²/h/bar) @ 25 °C*

Operating Characteristics
Operating temperature range: 32 °F to 100 °F (0 °C to 38 °C)
Maximum operating temperature: 122 °F (50 °C) for short-term operations such as cleaning*
Maximum feed pressure: 15 psi @ 75 °F (1.03 bar @ 25 °C)
Maximum transmembrane pressure: 10 psi @ 75 °F (0.69 bar @ 25 °C)

Sterilization
Autoclave sterilization: 121 °C (15 psi), minimum 30 minutes.
Apply a validated autoclave sterilization cycle that increases and decreases temperature gradually.
Consult autoclave sterilization instructions for further guidance.*

Biological Safety
SepraPor® filters meet the requirements as specified in the USP Biological Reactivity Tests, in vitro <87> (cytotoxicity) and in vivo <88> (Class VI Plastics).

Quality Assurance
SepraPor® filters comply with the Food and Drug Administration Code of Federal Regulations, Title 21, Parts 210 and 211. Product is manufactured and packaged in a cleanroom facility that, through voluntary compliance, meets or exceeds FDA Good Manufacturing Practice Standards. To ensure product reliability, Meissner’s Quality Assurance staff continually audits the manufacturing process for conformance to its Quality Management System. Each SepraPor® filter is clearly marked with filter lot number.
**Ordering Guide**

<table>
<thead>
<tr>
<th>XFM</th>
<th>M40</th>
<th>C</th>
<th>4</th>
<th>12</th>
<th>AA</th>
<th>S</th>
</tr>
</thead>
</table>

- **Product**
  - XFM: SepraPor® polysulfone hollow fiber filter cartridge

- **Housing Seal Configuration**
  - AA: Shell interface seal

- **O-ring Seal Material**
  - S: Silicone

- **Fluid Path Length (Nominal)**
  - 12" (30 cm)
  - 24" (60 cm)

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Cartridge Diameter</th>
<th>Effective Filtration Area for 12&quot; Length</th>
<th>Effective Filtration Area for 24&quot; Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2&quot; (5.1 cm)</td>
<td>4.3 ft² (0.4 m²)</td>
<td>8.6 ft² (0.8 m²)</td>
</tr>
<tr>
<td>5</td>
<td>3&quot; (7.6 cm)</td>
<td>9.7 ft² (0.9 m²)</td>
<td>22.6 ft² (2.1 m²)</td>
</tr>
<tr>
<td>6</td>
<td>4&quot; (10.2 cm)</td>
<td>24.8 ft² (2.3 m²)</td>
<td>45.2 ft² (4.2 m²)</td>
</tr>
<tr>
<td>8</td>
<td>5.9&quot; (15 cm)</td>
<td>N/A**</td>
<td>89.3 ft² (8.3 m²)</td>
</tr>
</tbody>
</table>

*Additional information about this filter product is available in the SepraPor® Green Docs document at www.meissner.com/green-docs.

**The 5.9" diameter cartridge is only available in the 24" length.

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