Description

Supor® EBV polyethersulfone membrane cartridges are validated, 0.2 µm sterilizing-grade filters with a unique combination of Pall Ultipleat® filter construction and built-in prefiltration to give longer filter life and lower filtration costs. The filters are suitable for sterile filtration of a wide range of fluids including buffers, biological fluids, tissue culture media, ophthalmic products and many others. The low protein and preservative binding of the Supor polyethersulfone membranes also ensures maximum transmission of active ingredients.

Pall’s range of Kleenpak™ Nova capsules are designed for use in medium to large scale production environments (100 L > 1000 L), often selected by the end user following scaling studies using smaller Kleenpak capsule formats. With the AB style cartridge format at its core, this capsule filter style can be supplied with the most comprehensive range of filter media.

Key Features and Benefits

- Encapsulated format for higher flexibility, minimized cleaning and low installation costs
- Hydrophilic polyethersulfone membrane for low adsorption and wide chemical compatibility
- Patented Ultipleat technology for high-area and good flow rates
- Built-in prefilter layer for long-life and low filtration costs
- High-strength construction tolerates up to 1 bar (14.5 psid) differential pressure during steam-in-place sterilization

Quality Standards

- Manufactured for use in conformance with cGMP
- 100% integrity tested
- ISO 9000 Certified Quality System
- Meets USP Biological Reactivity Test, in vivo, for Class VI-121 ºC Plastics
- Every filter tested during manufacture. Test correlated to microbial retention
- Certificate of Test provided includes:
  - Fabrication Integrity
  - Bacterial Retention
  - Materials of constructions
  - Effluent quality for cleanliness, TOC and Water Conductivity, pH and Pyrogens

Specifications

Materials of Construction
Capsule  Housing Bowl  Polypropylene
Housing Head*  Polypropylene
O-rings  Silicone elastomer

Cartridge  Membrane  Serial layer polyethersulfone (PES)
Drainage Layers  Polypropylene
End Cap and Cage  Polypropylene
Core  Polypropylene
Adapter  Polypropylene with internal stainless steel reinforcing ring

* Formulated with TiO$_2$ whitener which does not contribute to organic extractables

**Operating Characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Operating Temperature</td>
<td>40°C</td>
</tr>
<tr>
<td>Maximum Operating Pressure</td>
<td>3 bar g (44 psi g) at 40°C</td>
</tr>
<tr>
<td></td>
<td>[6.2 bar g (90 psi g) at 40°C for up to a maximum of 10 hours for integrity test purposes only]</td>
</tr>
</tbody>
</table>

1With compatible fluids only which do not soften, swell or adversely affect the product or its materials of construction

**Sterilization**

- **Autoclave**  Maximum temperature of 135 °C for 1 hour
- **Gamma Irradiation**  Maximum of 50 kGy

Consult Pall for procedures

**Typical Surface Area**

Effective filtration area per 254 mm (10 in.) module  0.66 m$^2$ (7.1 ft$^2$)

**Nominal Dimensions**

<table>
<thead>
<tr>
<th>In Line</th>
<th>NP6</th>
<th>NP7</th>
<th>NP8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Diameter including valves</td>
<td>154 mm (6.1 in.)</td>
<td>154 mm (6.1 in.)</td>
<td>154 mm (6.1 in.)</td>
</tr>
<tr>
<td>Length with hose barb inlet/outlet</td>
<td>397 mm (15.6 in.)</td>
<td>644 mm (25.4 in.)</td>
<td>895 mm (35.2 in.)</td>
</tr>
<tr>
<td>Length with sanitary inlet/outlet</td>
<td>335 mm (13.2 in.)</td>
<td>584 mm (23.0 in.)</td>
<td>834 mm (32.8 in.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>T Style</th>
<th>NT6</th>
<th>NT7</th>
<th>NT8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Diameter including valves</td>
<td>240 mm (9.5 in.)</td>
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<td>240 mm (9.5 in.)</td>
</tr>
<tr>
<td>Length</td>
<td>349 mm (13.7 in.)</td>
<td>598 mm (23.5 in.)</td>
<td>848 mm (33.4 in.)</td>
</tr>
</tbody>
</table>

**Flow Characteristics**

This data will be added shortly.

If you require flow data urgently, please contact Pall.