**EverLUX®**

0.2 µm SPH-grade Filter Cartridge

**Description**
The EverLUX® SPH0.2 filter cartridge is an advanced PES membrane cartridge that provides high contaminant capacity, extended service life, and high flow rates when filtering a wide range of aqueous and biological liquids. This hydrophilic filter withstands a wide pH range (1-14) and is ideal for bioburden reduction in a range of low-to-high contaminant liquids, including pharmaceutical preparations, biopharmaceuticals, parenterals, vaccines, complex biologicals, serum, cell and tissue culture media, buffers, media additives, supernatants, process intermediates, ophthalmic and other dilute preservative solutions, UPW, chemicals, alcohols, and sanitizing agents.

**Materials of Construction**
All components of the EverLUX® filter cartridge are either animal component free (ACF) or in compliance with EMEA/410/01 Rev. 3 (EDQM 5.2.8 07/2011:50208), and US Code of Federal Regulations 9 CFR 94.18 and 21 CFR 189.5. These materials are listed for food contact use in the Code of Federal Regulations (CFR), Title 21, as below:

<table>
<thead>
<tr>
<th>Components</th>
<th>Material</th>
<th>CFR Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membranes:</td>
<td>Polyethersulfone (PES)</td>
<td>21, 177.2440</td>
</tr>
<tr>
<td>Upstream support:</td>
<td>Polypropylene</td>
<td>21, 177.1520</td>
</tr>
<tr>
<td>Downstream support:</td>
<td>Polypropylene</td>
<td>21, 177.1520</td>
</tr>
<tr>
<td>Core:</td>
<td>Polypropylene</td>
<td>21, 177.1520</td>
</tr>
<tr>
<td>End caps:</td>
<td>Polypropylene</td>
<td>21, 177.1520</td>
</tr>
<tr>
<td>O-rings:</td>
<td>Typically silicone</td>
<td>21, 177.2600</td>
</tr>
<tr>
<td>Sealing method:</td>
<td>Thermal bonding</td>
<td></td>
</tr>
</tbody>
</table>

**Pore Size**
0.2 µm

**Effective Filtration Area**
7.3 ft² (0.68 m²) per 10”

**Minimum Bubble Point**
42 psi (2.89 bar), water

**Operating Characteristics**
- Operating temperature range: 32 °F to 100 °F (0 °C to 38 °C)
- Maximum temperature rating: 180 °F @ 30 psid (82 °C @ 2.1 bar)
- Maximum operating pressure: 80 psid @ 100 °F (5.5 bar @ 38 °C)
- Maximum reverse pressure: 15 psid @ 100 °F (1.0 bar @ 38 °C)

**Sterilization**
Autoclave: 121 °C to 135 °C (15 to 30 psi, 1 to 2 bar), 30 to 60 min., ≥ 3 cycles. Water wet membrane prior to autoclaving.
Steam in place (SIP): 121 °C to 135 °C (15 to 30 psi, 1 to 2 bar), 30 to 60 minutes, ≥ 3 cycles. Water wet membrane first.

**Biological Safety**
EverLUX® filters meet the requirements as specified in the current USP <88> Class VI plastics, <87> cytotoxicity and physicochemical tests; after flush, filters comply with USP 43 oxidizable substances test. Bacterial endotoxin levels in aqueous extracts of EverLUX® filters are less than 0.5 EU/mL, as determined using the current USP <85> Limulusamebocyte lysate (LAL) test. No binders, adhesives, or surfactants are used in the construction of EverLUX® filters. Filters comply with European Commission Regulation (EU) No 10/2011.

**Quality Assurance**
EverLUX® 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 EverLUX® filter is integrity tested during manufacture and is clearly marked with filter type and lot number.
Ordering Guide

O-ring Seal Material
- B: Buna
- E: EPR
- S: Silicone
- T: Teflon® over Silicone
- V: Viton®
- X: Teflon® over Viton®

Reinforcement Ring Option
- (blank): Standard - no reinforcement ring
- R: Reinforcement ring required for autoclave/SIP applications

Cartridge Configuration
- C2: SOE; 222 O-rings, button cap end
- C6: SOE; 226 O-rings, button cap end
- F2: SOE; 222 O-rings, fin end
- F6: SOE; 226 O-rings, fin end

Filter Length

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Grade</th>
<th>Pore Size</th>
</tr>
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<tbody>
<tr>
<td>EverLUX® hydrophilic PES membrane</td>
<td>SPH</td>
<td>0.2 μm</td>
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</table>

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

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