**Description**
The STyLUX® ST0.2 filter is a hydrophilic PES membrane filter compatible with a wide range of liquids. It withstands a wide pH range (1-14) and can be used to remove contaminants from a broad range of pharmaceutical preparations, antibiotics, vaccines, protein solutions, virus suspensions, enzymes, buffers ophthalmic solutions, reagents, salt solutions, nutrients, serum and blood-based products, and biologicals. The filter’s asymmetrical structure provides bacteria and particle removal at high flow rates and low pressure drops. STyLUX® has very low binding characteristics for preservatives commonly used in the pharmaceutical industry and is compatible with most cleaning chemicals, sanitizers, and biocides.

The STyLUX® ST0.2 capsule filter is 100% integrity tested during manufacture and has the added benefit of quality certification that meets the critical demands of the pharmaceutical, biotechnology, and related industries.

**Materials of Construction**
All components of the STyLUX® filter capsule are animal component free. 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>Membrane</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>Outer guard</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>Capsule housing</td>
<td>Polypropylene</td>
<td>21, 177.1520</td>
</tr>
<tr>
<td>Sealing method</td>
<td>Thermal bonding</td>
<td></td>
</tr>
</tbody>
</table>

**Pore Size**
0.2 µm

**Minimum Bubble Point**
- 44 psi (3.03 bar), water
- 16 psi (1.10 bar), 60% IPA/40% water
- 15 psi (1.03 bar), 70% IPA/30% water

**Maximum Diffusion Rate**
20 mL/min at 35 psi (2.41 bar) water, air

**Typical Water Flow Rate**
0.78 psid/GPM (0.70 L min⁻¹ at Δp 10 mbar)

**Bacterial Retention**
>10⁷ per cm² removal of *Brevundimonas diminuta* per ASTM F838

**Operating Characteristics**
- Operating temperature range: 32 ºF to 100 ºF (0 ºC to 38 ºC)
- Maximum temperature rating: 160 ºF @ 35 psig (71 ºC @ 2.4 bar)
- Maximum operating pressure: 75 psig @ 100 ºF (5.2 bar @ 38 ºC), liquid service
- Maximum operating pressure: 50 psig @ 100 ºF (3.4 bar @ 38 ºC), gas service
- Maximum reverse pressure: 15 psig @ 100 ºF (1.0 bar @ 38 ºC)

**Sterilization**
- Autoclave: 121 to 135 ºC (15 to 30 psi, 1 to 2 bar), 30 to 60 min, ≥ 3 cycles. Water wet membrane prior to autoclaving.
- Irradiation: 25 to 40 kGy once. Do not autoclave irradiated capsules. Capsules must not be in-line steam sterilized.

**Biological Safety**
STyLUX® 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 STyLUX® filters are less than 0.5 EU/mL, as determined using the the current USP <85> Limulus amebocyte lysate (LAL) test. No binders, adhesives, or surfactants are used in the construction of STyLUX® filters. Filters comply with Commission Regulation (EU) No 10/2011.
**Quality Assurance**

STyLUX® filters are supplied with a Certificate of Quality verifying the high standards and superior performance of the product. STyLUX® 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 STyLUX® filter is integrity tested during manufacture and is clearly marked with filter type, lot number, and serial number.

**Ordering Guide**

### Capsule Options
- Standard capsule: C
- Sterile capsule: G
- Opaque shell: O

### Effective Filtration Area
- 5.2 ft² (0.48 m²) J

### Housing Material Designator
- Gamma-stable polypropylene, animal component free (ACF) 2

### Vent/Drain Ports
- 0: No vent/drain port
- 1: One luer port with cap, outlet side
- 2: Standard; two luer ports with caps
- 4: Two sanitary valves with hose barbs
- 5: One sanitary valve with hose barb, outlet side
- 6: One sanitary valve with hose barb, inlet side

### Inlet/Outlet Connections

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>1&quot; sanitary flange</td>
<td>ST</td>
</tr>
<tr>
<td>02</td>
<td>1&quot; sanitary flange in; 3/8&quot; hose barb out</td>
<td>ST</td>
</tr>
<tr>
<td>09</td>
<td>1&quot; sanitary flange in; 1/2&quot; hose barb out (flexible tubing)</td>
<td>ST</td>
</tr>
<tr>
<td>CC</td>
<td>1/2&quot; hose barb (rigid tubing)</td>
<td>ST</td>
</tr>
<tr>
<td>LL</td>
<td>1&quot; sanitary flange, long neck</td>
<td>ST</td>
</tr>
<tr>
<td>22</td>
<td>3/8&quot; hose barb</td>
<td>ST</td>
</tr>
<tr>
<td>2B</td>
<td>3/8&quot; hose barb w/filling-bell</td>
<td>ST</td>
</tr>
</tbody>
</table>

### Product Grade Retention Rating
- STyLUX® hydrophilic PES membrane
  - Grade: ST
  - Retention Rating: 0.2 μm

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

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