Duraclear®
PP Depth-type Microfiber Filter
Duraclear® filter cartridges are pleated polypropylene depth type filters that are a superior alternative to string wound, molded, and polyspun depth filter cartridges. Duraclear® filters are an economical, multi-use, premium quality product available in nominal retention ratings from 1 to 50 micron.

Duraclear® filter media is composed of continuous, self-bonded polypropylene microfibers. It is manufactured by a unique process that controls the uniformity and density of the continuous microfibers. The Duraclear® filter has no resin binders that can break down and leach out. This prevents the typical problems of channeling and media migration that are characteristic of conventional depth filter media.

The Duraclear® filter's heavy-duty core and support components are constructed of 100% polypropylene with polypropylene, polyurethane or self-sealing vinyl end caps.

The Duraclear® filter is specifically designed to provide high efficiency particle removal in aqueous and non-aqueous liquids. The unique combination of cartridge design and media selection contributes to the Duraclear® filter's superior flow rate, lower pressure drop, exceptional contaminant holding capacity and longer operational life. These features distinguish Duraclear® as a superior, cost-effective alternative to string wound, molded and polyspun depth filters.

**Features**
- Particle removal ratings of 1, 3, 5, 10, 15, 25 and 50 micron
- Self-bonded polypropylene filter media
- Contains no resin binders or surfactants
- Pleated construction
- Maximum effective surface area
- Superior flow characteristics
- High dirt-holding capacity
- Heavy-duty core
- Many lengths available

**Benefits**
- Broad selection of the optimum filter media to meet application requirements
- Consistent porosity and particle removal; no channeling or migration of filter media
- Extractables are kept to a minimum; no pre-flushing is required
- Filter surface area is optimized
- High flow rates; high contaminant capacity
- Pressure loss is reduced; energy costs are minimized
- Long filter service life; lower operating costs; reduced maintenance costs
- Increased dirt holding capacity; withstands higher differential pressure
- Direct competitive replacement; fits most standard filter housings

**Typical Applications**
Duraclear® filter cartridges can be used as prefilters or final filters for controlling contaminants in fluid processes. Duraclear® filters are most appropriate for use when high quality filtration and economy are important.

**Typical applications for the industrial-grade, black vinyl end cap configuration include:**
- Plating
- Chemicals
- Photographic chemicals
- Oil and gas
- Printed circuit boards
- Metal finishing
- Coatings
- Utilities
- Inks

**Typical applications for the FDA-acceptable, blue vinyl end cap configuration include:**
- Water purification
- Food and beverage
- Bottled water
- Cosmetics

**Typical applications for the polypropylene end cap configuration include:**
- Chemicals
- Solvents
- Coatings
- Biologicals & diagnostics
- Food & beverage

**Typical applications for the polyurethane end cap configuration include:**
- Water purification
- Cooling towers
- Pre-R.O.
Materials of Construction
Filter Media: Polypropylene
Upstream Support: Polypropylene
Downstream Support: Polypropylene
Outer Protective Netting: Polypropylene
Heavy-Duty Core: Polypropylene
End Caps: Potted vinyl, potted polyurethane, or polypropylene with buna, EPR, polyethylene, silicone, Teflon® or Viton® gaskets

Duraclear® filters are nonfiber-releasing as defined in 21 CFR 210.3(b)(6) and 211.72. Duraclear® filters with blue vinyl end caps meet the FDA requirements for food contact per 21 CFR 177.

Filtration Ratings (Nominal)
1, 3, 5, 10, 15, 25, 50 µm

Maximum Operating Temperatures & Pressures
\[ \Delta p \text{ 80 psi @ 90 °F (} \Delta p \text{ 5,5 bar @ 32 °C)} \]
\[ \Delta p \text{ 50 psi @ 150 °F (} \Delta p \text{ 3,4 bar @ 66 °C)} \]
\[ \Delta p \text{ 20 psi @ 180 °F (} \Delta p \text{ 1,4 bar @ 82 °C)} \]

Contaminant Holding Capacity

\[ \begin{align*}
\text{Contaminant, grams} & \\
1 \mu m & = 100 \\
3 \mu m & = 200 \\
5 \mu m & = 300 \\
10 \mu m & = 400 \\
15 \mu m & = 500 \\
25 \mu m & = 1000 \\
50 \mu m & = 2000 \\
\end{align*} \]

Removal Rating†
†1-10 µm: Tested with AC Fine Test Dust @ 2 gpm
15-50 µm: Tested with AC Coarse Test Dust @ 2 gpm
Comparative study under equally controlled conditions is available upon request.

Cartridge Dimensions (nominal)
Diameter:
- 2.63” (67 mm) with vinyl end caps
- 2.75” (70 mm) with polypropylene end caps
- 2.75” (70 mm) with polyurethane end caps

Lengths:
- 9.75”, 10”, 19.5”, 20”, 29.25”, 30”, 39”, 40” (24.8 cm, 25.4 cm, 49.5 cm, 50.8 cm, 74.3 cm, 76.2 cm, 99.1 cm, 101.6 cm)

Typical Water Flow Rates per 10” Cartridge

<table>
<thead>
<tr>
<th>Contaminant, grams</th>
<th>L min⁻¹</th>
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</thead>
<tbody>
<tr>
<td>1 µm</td>
<td>0</td>
</tr>
<tr>
<td>3 µm</td>
<td>0.05</td>
</tr>
<tr>
<td>5 µm</td>
<td>0.1</td>
</tr>
<tr>
<td>10 µm</td>
<td>0.15</td>
</tr>
<tr>
<td>15 µm</td>
<td>0.2</td>
</tr>
<tr>
<td>25 µm</td>
<td>0.35</td>
</tr>
<tr>
<td>50 µm</td>
<td>0.4</td>
</tr>
</tbody>
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Initial Differential Pressure, psid vs. Flow Rate, gpm
## End Cap Configuration

<table>
<thead>
<tr>
<th>Filter Media</th>
<th>Nominal Rating</th>
<th>Cartridge Length</th>
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<tbody>
<tr>
<td>$D = \text{polypropylene microfiber}$</td>
<td>01 $= 1 \mu m$</td>
<td>97 $= 9.75'' (24.8 \text{ cm})$</td>
</tr>
<tr>
<td></td>
<td>03 $= 3 \mu m$</td>
<td>10 $= 10'' (25.4 \text{ cm})$</td>
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<td>05 $= 5 \mu m$</td>
<td>19 $= 19.5'' (49.5 \text{ cm})$</td>
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<td>50 $= 50 \mu m$</td>
<td>39 $= 39'' (99.1 \text{ cm})$</td>
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### Ordering Information

**BK**
- Black, industrial grade vinyl end caps
- Blue, FDA acceptable vinyl end caps

**PB**
- Polypropylene end caps w/ Buna gaskets

**PE**
- Polypropylene end caps w/ EPR gaskets

**PP**
- Polypropylene end caps w/ polyethylene gaskets

**PS**
- Polypropylene end caps w/ silicone gaskets

**PT**
- Polypropylene end caps w/ Teflon® gaskets

**PV**
- Polypropylene end caps w/ Viton® gaskets

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### Ordering Information

**C2B**
- Polyurethane self-sealing end cap

#### Single Open End (SOE)
- C2 = SOE; -222 O-rings, button cap end
- F2 = SOE; -222 O-rings, fin end
- C6 = SOE; -226 O-rings, button cap end
- F6 = SOE; -226 O-rings, fin end

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

SOE cartridges are only available in lengths of 10'', 20'', 30'', 40'' (25.4 cm, 50.8 cm, 76.2 cm, 100.6 cm)