

Duraclear<sup>®</sup>



## Duraclear® Filter Cartridge

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.



Duraclear® SEM

**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**

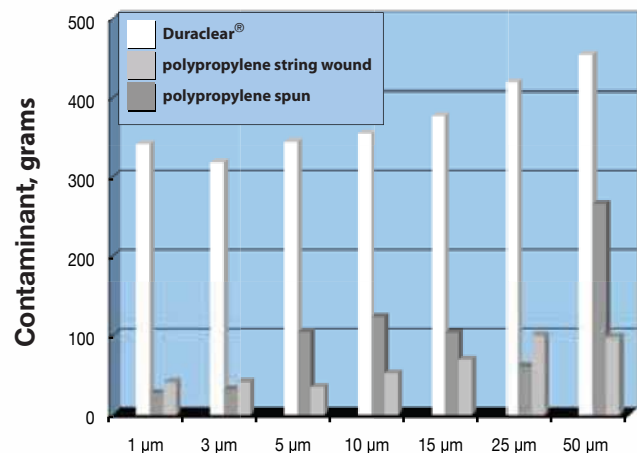
Δp 80 psi @ 90 °F (Δp 5,5 bar @ 32 °C)  
 Δp 50 psi @ 150 °F (Δp 3,4 bar @ 66 °C)  
 Δp 20 psi @ 180 °F (Δp 1,4 bar @ 82 °C)

**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)

**Contaminant Holding Capacity**

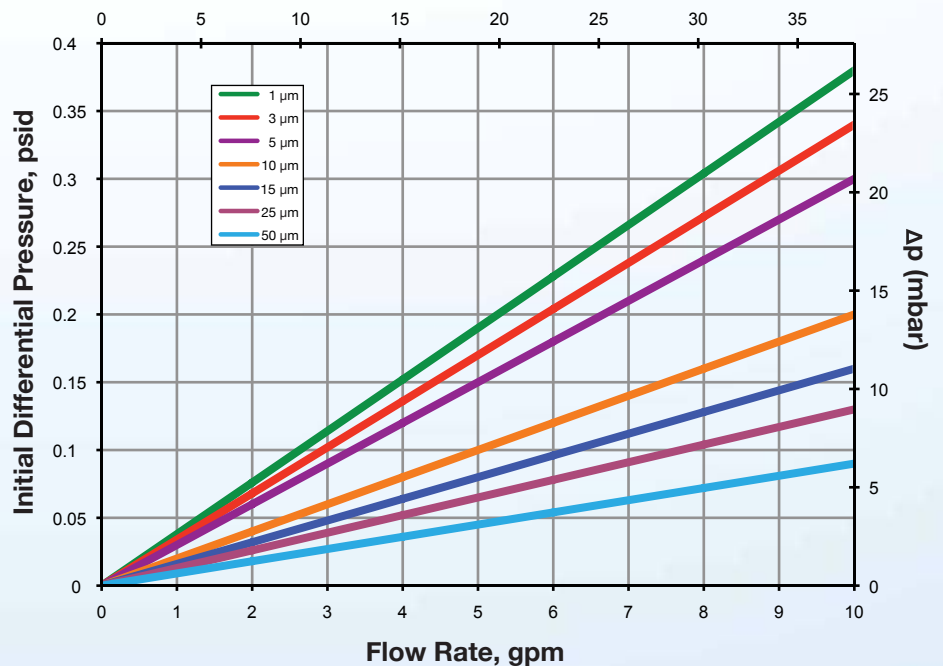


**Removal Rating†**

†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.

**Typical Water Flow Rates per 10" Cartridge**

L min<sup>-1</sup>

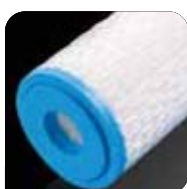


## End Cap Configuration



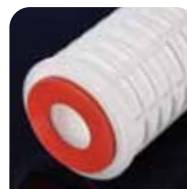
**Black Vinyl**

Industrial grade black vinyl for BK configuration



**Blue Vinyl**

FDA acceptable blue vinyl for FB configuration



**Flat Gasket**

Flat Gasket; open end for PB, PE, PP, PS, PT, PV configurations

## Ordering Information

Filter Media	Nominal Rating	Cartridge Length
<i>D</i>	<i>15</i>	<i>97</i>
<b>D</b> = polypropylene microfiber	<b>01</b> = 1 µm <b>03</b> = 3 µm <b>05</b> = 5 µm <b>10</b> = 10 µm <b>15</b> = 15 µm <b>25</b> = 25 µm <b>50</b> = 50 µm	<b>97</b> = 9.75" (24,8 cm) <b>10</b> = 10" (25,4 cm) BK and FB end caps only <b>19</b> = 19.5" (49,5 cm) <b>20</b> = 20" (50,8 cm) <b>29</b> = 29.25" (74,3 cm) <b>30</b> = 30" (76,2 cm) <b>39</b> = 39" (99,1 cm) <b>40</b> = 40" (100,6 cm)

## End Cap Configuration

*BK*

### Double Open End (DOE)

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

## End Cap Configuration



**Flat Gasket**

Flat Gasket; open end for WH configuration



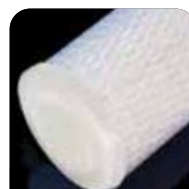
**-222 O-ring**

External -222 O-rings; open end for C2 and F2 SOE configurations



**-226 O-ring**

External -226 O-rings with locking tabs; open end for C6 and F6 SOE configurations



**Button Cap**

Button Cap; closed end for C2 and C6 SOE configurations



**Alignment Fin**

Alignment Fin; closed end for F2 and F6 SOE configurations

## Ordering Information

Filter Media	Nominal Rating	Cartridge Length
<i>D</i>	<i>10</i>	<i>20</i>
<b>D</b> = polypropylene microfiber	<b>01</b> = 1 µm <b>03</b> = 3 µm <b>05</b> = 5 µm <b>10</b> = 10 µm <b>15</b> = 15 µm <b>25</b> = 25 µm <b>50</b> = 50 µm	<b>97</b> = 9.75" (24,8 cm) <b>10</b> = 10" (25,4 cm) <b>19</b> = 19.5" (49,5 cm) <b>20</b> = 20" (50,8 cm) <b>29</b> = 29.25" (74,3 cm) <b>30</b> = 30" (76,2 cm) <b>39</b> = 39" (99,1 cm) <b>40</b> = 40" (100,6 cm)

## End Cap Configuration

*C2B*

### Double Open End (DOE)

- WH** = 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)*

