



Purolator

PUROCEPT™

INNOVATIVE MULTI-ZONE MELT BLOWN FILTER CARTRIDGES

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Innovative Multi-Zone Melt Blown Filter Cartridges



PUROCEPT Series depth filter cartridges provide high performance filtration of fluids in a wide range of applications. This series of high performance filter cartridges is manufactured with a proprietary micro-processor controlled process that creates a

**High efficiency.
Long service life.
Improved strength.**

highly consistent product. The polypropylene materials of construction are chemically inert — allowing PUROCEPT cartridges to be used in a wide range of demanding applications. PUROCEPT cartridges deliver high efficiency, long service life and improved strength.

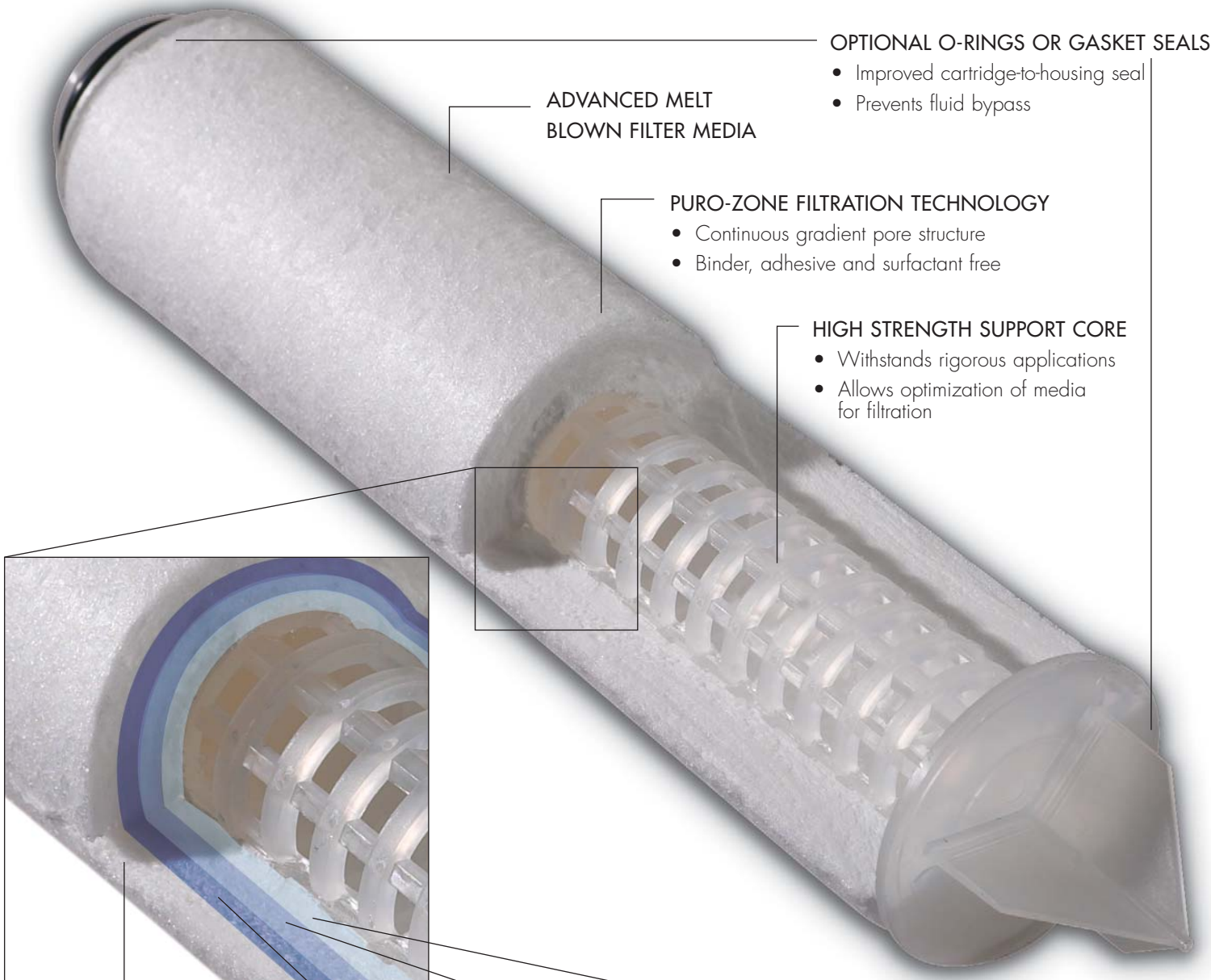
Purolator's proprietary Puro-Zone technology allows the creation of multiple zones within the depth of the filter cartridge. Each zone contains a matrix of declining diameter fibers. This multi-zone design produces a gradient pore structure, which thoroughly captures larger particles in the upstream layers of the filter while efficiently capturing smaller particles in the inner layers. Purolator has optimized each filter grade to provide high efficiency filtration and mechanical strength.



TECHNICAL ADVANTAGES

- Removal ratings from 0.5 to 30 μm .
- Proprietary Puro-Zone technology allows the creation of multiple filtration zones within the depth of the filter cartridge.
- Continuous gradient structure provides effective prefiltration and final filtration.
- Advanced microprocessor controlled manufacturing process delivers an extremely accurate and consistent product.
- High-strength polypropylene center core maximizes flow and optimizes each filtration zone.
- 100% polypropylene materials of construction allow use in a wide range of demanding applications.
- PUROCEPT™ cartridges are binder, adhesive and surfactant free.
- Rinse up to 18 megohm-cm with a minimum amount of throughput.
- Configurations available to retrofit most industry standards.
- Continuous lengths up to 40" (102 cm).

PUROCEPT™ INNOVATIVE DESIGN



OPTIONAL O-RINGS OR GASKET SEALS

- Improved cartridge-to-housing seal
- Prevents fluid bypass

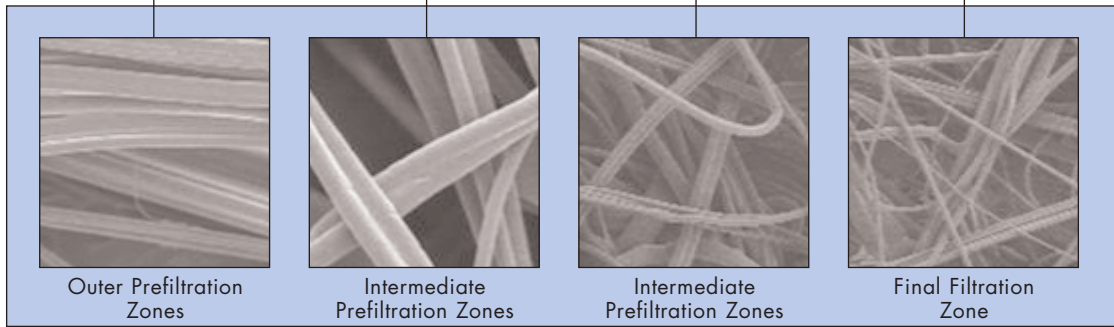
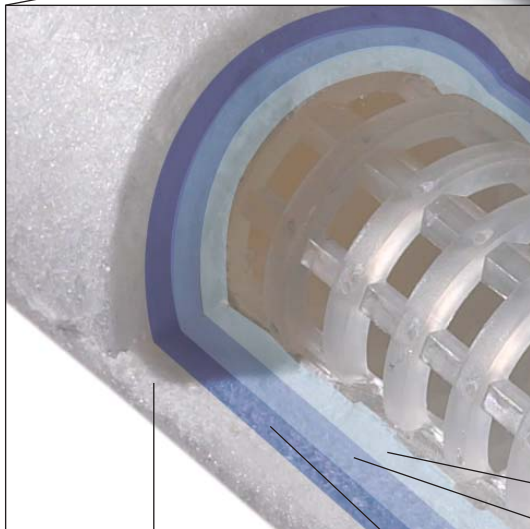
ADVANCED MELT BLOWN FILTER MEDIA

PURO-ZONE FILTRATION TECHNOLOGY

- Continuous gradient pore structure
- Binder, adhesive and surfactant free

HIGH STRENGTH SUPPORT CORE

- Withstands rigorous applications
- Allows optimization of media for filtration



MICROGRAPHS DEPICTING THE GRADED PORE STRUCTURE OF PUROCEPT SERIES FILTERS (Magnification 200x)

PRODUCT FEATURE	PRODUCT BENEFIT	CUSTOMER BENEFIT
<p>PROPRIETARY PURO-ZONE TECHNOLOGY</p>	<ul style="list-style-type: none"> • Consistent filtration as differential pressure increases • Cartridge will not randomly unload contaminant in pulse flow conditions • High flow rates at lower differential pressures 	<ul style="list-style-type: none"> • High-performance filtration in critical applications • Reproducible filtration performance under various flow conditions • Longer on-stream life • Greater energy conservation and savings
<p>GRADIENT PORE STRUCTURE</p>	<ul style="list-style-type: none"> • Outside layers offer cost effective filtration of larger particles while inner layer provides precise fine contaminant retention 	<ul style="list-style-type: none"> • Longer on-stream life • Reduced element disposal costs • Lower filtration costs
<p>POLYPROPYLENE FILTER MEDIA</p>	<ul style="list-style-type: none"> • Chemically inert • Extensive chemical resistance 	<ul style="list-style-type: none"> • High-performance filtration in a wide array of applications • Lower inventory expenses since cartridges can be used in multiple applications within a single facility
<p>HIGH-STRENGTH SUPPORT CORE</p>	<ul style="list-style-type: none"> • High collapse strength • Solid temperature resistance • Optimized flow distribution 	<ul style="list-style-type: none"> • Reduced risk of element collapse • Broad range of applications • Lower filtration costs
<p>MICRO FINE MELT BLOWN FIBERS</p>	<ul style="list-style-type: none"> • Highly efficient filtration performance • Higher void volumes than competitive products 	<ul style="list-style-type: none"> • Homogeneous product improves process compatibility • Long on-stream life cycles • Lower filtration costs
<p>MICROPROCESSOR CONTROLLED MANUFACTURING PROCESS</p>	<ul style="list-style-type: none"> • Highly consistent product • Minimal variability across lots 	<ul style="list-style-type: none"> • Superior product quality • Optimized production yields • Reduced filtration costs
<p>CARTRIDGES ARE BINDER, ADHESIVE AND SURFACTANT FREE</p>	<ul style="list-style-type: none"> • Minimal extractables • No foaming 	<ul style="list-style-type: none"> • Quick rinse-up times • Maximum fluid compatibility • Clean process fluids
<p>ALL MATERIALS ARE FDA LISTED FOR FOOD AND BEVERAGE CONTACT AND MEET USP CLASS VI PLASTIC REQUIREMENTS</p>	<ul style="list-style-type: none"> • Cartridges can be used in pharmaceutical, food and beverage applications 	<ul style="list-style-type: none"> • Non-toxic, high-performance filtration in critical applications



PERFORMANCE SPECIFICATIONS

MICRON RATING:

0.5, 1, 5, 10, 20, 30 μm

MAXIMUM FORWARD DIFFERENTIAL PRESSURE:

25 psid (1.7 bar) @ 150° F (66° C)

60 psid (3.4 bar) @ 86° F (30° C)

RECOMMENDED CHANGE OUT DIFFERENTIAL PRESSURE:

35 PSID (2.4 bar)

BIOSAFETY:

All polypropylene components meet the specifications for biological safety as per the USP for Class VI-121° C plastics.

FDA LISTED MATERIALS:

Manufactured from material which are listed for food and beverage applications in Title 21 of the U.S. Code of Federal Regulations.

HIGH PURITY CONSTRUCTION:

PUROCEPT Series filter cartridges are free of adhesives, binders and surfactants.

RINSE UP:

PUROCEPT Series cartridges rinse up to 18 Megohm-cm with a minimum of throughput.

AUTOCLAVING:

Single Open End PUROCEPT cartridges can be autoclaved for 30 minutes at 250° F (121° C) under no end load conditions. The filter cartridges should be allowed to cool to normal system operating temperatures prior to use.

STEAM STERILIZATION:

Not recommended.



MATERIALS OF CONSTRUCTION

OUTSIDE DIAMETER (NOMINAL)

2.5" (6.4 cm)

LENGTHS (NOMINAL)

4" (10.2 cm)

5" (12.7 cm)

9.75" (24.8 cm),

9.875" (25.1 cm)

10" (25.4 cm)

19.5" (49.5 cm)

20" (50.8 cm)

29.25" (74.3 cm)

30" (76.2 cm)

39" (99.1 cm)

39.5" (100.3 cm)

40" (102 cm)

FILTER MEDIA

Melt blown Polypropylene

CENTER CORE

Polypropylene

END CAPS

Polypropylene

GASKETS/O-RINGS

Silicone, EPDM, Viton®A, Buna-N



APPLICATIONS

PUROCEPT filter cartridges provide superior filtration performance for a wide range of critical commercial and industrial applications such as those shown below.

MARKET	APPLICATION
BEVERAGE	<ul style="list-style-type: none"> Bottled water, wine pre-filtration, wine final cellar filtration, beer filtration (trap filter), fruit juice, soft drinks, spirits, sugar solutions
WATER	<ul style="list-style-type: none"> Process water pre-filtration, hot water heating systems, cooling water, cooling towers
INKS AND COATINGS	<ul style="list-style-type: none"> Solvents, water, paint, clear coat, inks, automotive coatings, industrial coatings, lacquers
CHEMICAL PROCESSING	<ul style="list-style-type: none"> Bulk chemical filtration, acrylates, alcohols, bleach, alkalis, acids, make-up water, sodium hypochlorite, titanium dioxide
OIL & GAS	<ul style="list-style-type: none"> Completion fluids, deep well injection, ammine filtration, acrylates
METAL FINISHING	<ul style="list-style-type: none"> Machine coolants, plating solutions and chemicals, stripping solutions, anodizing, hydraulic press oil, aqueous parts washing
COSMETICS	<ul style="list-style-type: none"> Mouthwash, lotions, soaps, water, mineral oils
ELECTRONICS	<ul style="list-style-type: none"> Semiconductors, DI water, chemicals, copper recovery, photoresists, pre-RO, bulk chemical pre-filtration



PRACTICAL USES	
Classification	Excellent ★ ★ ★ ★ Good ★ ★ ★ Suggest Testing ★
Organic Acids	★ ★ ★ ★
Inorganic Acids	★ ★ ★ ★
Solvents	★ ★ ★ ★
Alkalies	★ ★ ★ ★
Oils	★ ★
Water (ambient)	★ ★ ★ ★
Oxidants	★ ★ ★ ★
Brine Solution	★ ★ ★ ★
Steam Sterilization	Not Recommended
Micro-Organism Resistance	★ ★ ★ ★



INNOVATIVE MULTI-ZONE MELT BLOWN FILTER CARTRIDGES FROM PUROLATOR ADVANCED FILTRATION



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