



F I L T R A T I O N

▽ POREX® Radial Cartridge Filter™

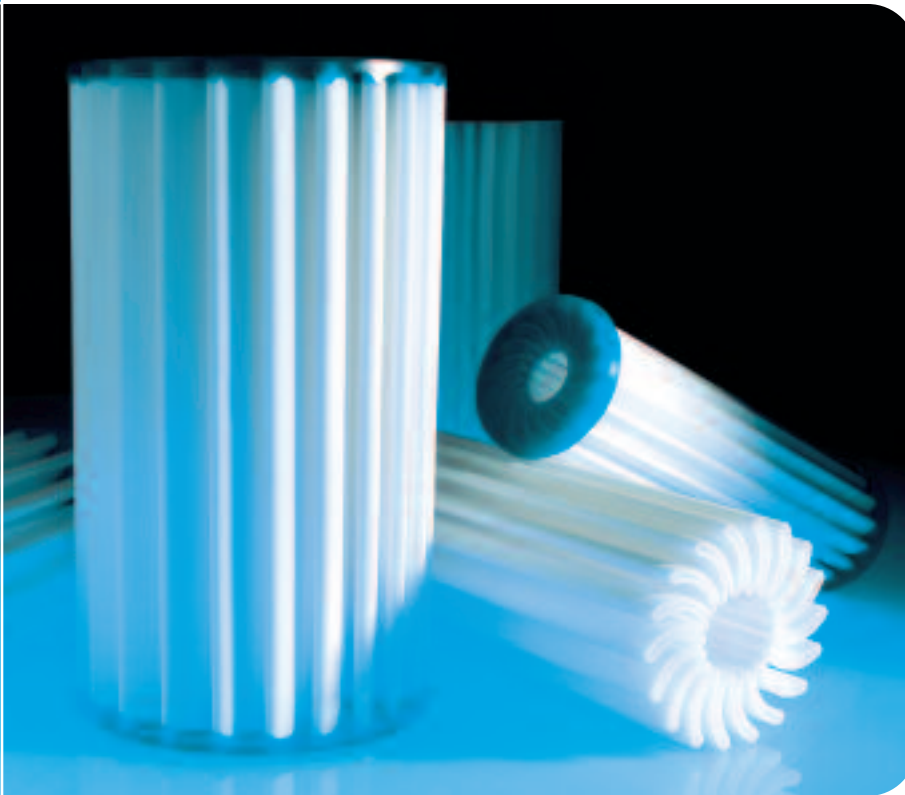
Porous Plastic
High Flow Capacity
Long Service Life
Surface Filtration
High Solids Loading
Cleanable
Backwashable

POREX

Solutions Through Material ScienceSM

Structural Filtration Media for Optimal Performance

POREX® Radial Cartridge Filter™ is a unique, patented porous plastic cartridge designed to fit standard industrial and commercial cartridge filter housings. The polyethylene (HDPE and UHMWPE) cartridges are available in a wide range of pore sizes from 5 to 50 microns. The single-layer, one-piece molded structure is backwashable and cleanable.



Performance Attributes:

- Porous Polyethylene (HDPE and UHMWPE)
- Wide Range of Absolute Pore Sizes
- High Flow Rates
- Long Service Life
- Backwashable
- Classification Type Filtration
- High Surface Area Radial Geometry
- Excellent Thermal and Chemical Resistance
- Integrally-Sealed, One-Piece Design
- Minimal Construction Materials
- Multiple Diameters, Lengths and End Configurations Available
- Fits Standard Industrial and Commercial Filter Housings

Why Choose POREX Radial Cartridge Filters?

- Rigid, lightweight POREX Radial Cartridge Filters install easily into existing filtration systems
- Porous PE cartridge is a one-piece, molded structure without seam or cage required for many applications
- Single-layer construction optimizes backwashable capability
- Molded high-density polyethylene cartridges have excellent chemical and physical resistance to withstand cleaning and reuse
- Uniform, omni-directional pore structure ensures the right cartridge for your application
- Filtration material complies with the Code of Federal Regulations, Title 21, Section 177.1520 Item 2.1, for food contact
- Functional materials (antimicrobials, etc.) can be added to further enhance performance

Material Technology – What is Porous Plastic?

Throughout each POREX Radial Cartridge Filter runs an intricate network of open-celled, omni-directional pores which gives the media consistency throughout the cartridge for an innovative combination of filtering capability and structural strength.



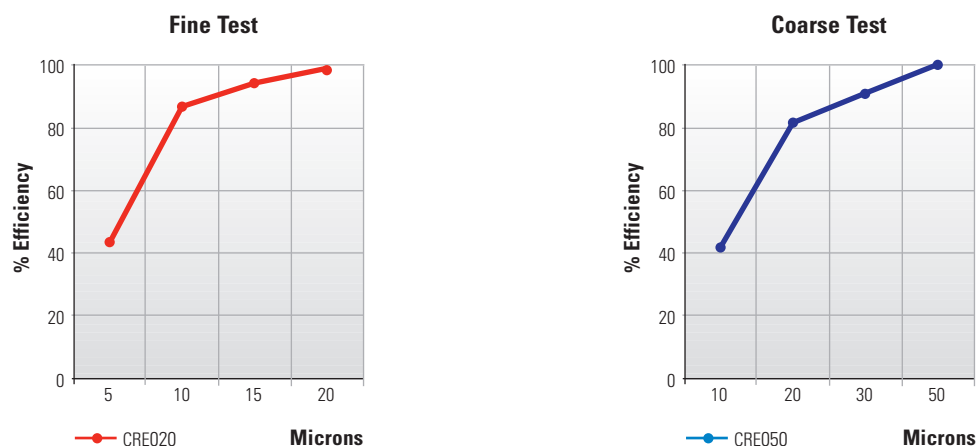
20μ

The microphotograph illustrates the uniform pore structure of POREX Radial Cartridge Filter.

Filtration Efficiency

POREX Radial Cartridges are classification type filters that effectively remove particles at and above their respective ratings while allowing most smaller particles to pass through. POREX Radial Cartridges maintain their high particle removal efficiency for consistent, reproducible results throughout the life of the filter.

Filter performance is often expressed in terms of percent efficiency, defined as the ratio of upstream particle concentration compared to the downstream concentration that has passed through a filter body (multiplied by 100).



The Initial Retention Efficiency results per ASTM 795-88 are based on a single pass using a 2.65" diameter cartridge with 10" length at a flow rate of 3 gpm/ft² of water with ISO Fine or Coarse Test Dust.

Chemical Resistance

Made from commercially available thermoplastics, POREX® Porous Plastics are resistant to a broad spectrum of corrosive chemicals and reagents. The customer should perform appropriate tests to determine the performance of POREX Porous Plastics under each specific operating condition. (See *Chemical Compatibility Chart* for specific ratings.)

It is important to note that, unless otherwise agreed in writing, the products are sold without a chemical resistance warranty. The buyer and user assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

Porex does not guarantee the accuracy of information or the suitability of products in specific applications. Users should determine suitability of the product for their specific application.



Product Ordering Guide

Type	Polymer	Pore Size (microns)	Length (nominal)	Outside Diameter	End Cap	Cage
CR Cartridge Radial Grid	E Polyethylene	005 5	0 4.875"	2 2.65" (6.7 cm)	N DOE / PU	N None
		010 10	1 9.9"	4 4.5" (11.4 cm)	S SOE / PU	Y Yes
		020 20	2 19.9"	6 6.1" (15.5 cm)	A DOE (Gasket / Gasket)	
		050 50	3 29.9"		B SOE (Gasket / Flat)	
			4 40"		C 222 / Flat	
			6 9.75"		D 222 / Fin	
			7 19.5"		E 226 / Flat	
			8 29.25"		F 226 / Fin	
			9 39"			

Flow vs Pressure Drop*

The specific pressure drop values (psi/gpm) per 10" cartridge are provided for each filter grade. POREX Radial Cartridges exhibit superior flow characteristics to other cartridges with comparable micron ratings. The benefits of lower pressure drop are longer cartridge life, higher throughput and lower overall cost.

* Based on cumulative data supplied by an independent laboratory.
 Flow rates are based on the media and may be limited by the core of the cartridge or the cartridge housing.

POREX Radial Cartridge Filter Removal Ratings

2.65 inch Diameter	Part No.	Filter Media	Micron Rating High Performance	GPM/ PSID	PSID/ GPM
	CRE005	UHMWPE	5	3.8	0.26
	CRE010	UHMWPE	10	4.6	0.22
	CRE020	UHMWPE	20	14.6	0.07
	CRE050	HDPE	50	20.4	0.05

4.5 inch Diameter	Part No.	Filter Media	Micron Rating High Performance	GPM/ PSID	PSID/ GPM
	CRE005	UHMWPE	5	8.3	0.12
	CRE010	UHMWPE	10	10.1	0.10
	CRE020	UHMWPE	20	31.7	0.03
	CRE050	HDPE	50	44.4	0.02

6.1 inch Diameter	Part No.	Filter Media	Micron Rating High Performance	GPM/ PSID	PSID/ GPM
	CRE005	UHMWPE	5	14.4	0.07
	CRE010	UHMWPE	10	17.7	0.06
	CRE020	UHMWPE	20	55.7	0.02
	CRE050	HDPE	50	78.0	0.013

Support Worldwide

Porex Corporation, as a global leader in supplying porous plastic components, is committed to quality, innovation, and customer satisfaction. Porex owns and operates manufacturing facilities in Europe, Asia and North America providing both standard and custom components to our customers through a global network of sales engineers, agents and distributors. Porex has attained ISO 9001 Certification at the USA, Germany and Malaysia operations. With an experienced engineering support staff and global distribution capabilities, Porex brings innovative solutions to the filtration marketplace.

Intellectual Property

Porex maintains a portfolio of intellectual property falling into patented, patent-pending, and trade secret categories. Porex Radial Cartridge Filter has been awarded US Patent # 7,125,490, by the United States Patent Office.

FDA and NSF Approved

The majority of the raw materials used in the production of POREX Radial Cartridge Filters have been certified by their raw material suppliers as meeting FDA requirements in the Code of Federal Registration, 21 CFR 177.1520, for food contact, including cooking applications. Many components have been used in liquid filtration devices that carry NSF certification. In applications requiring NSF approval, Porex will work in conjunction with the NSF to help guide a product through the NSF application certification process.


Technology Leader

Porex is all about innovation! For nearly 40 years, Porex has been a leader in the development and manufacture of porous plastic technologies. High-volume production and state-of-the-art tooling coupled with an advanced polymer laboratory and extensive material science expertise ensure timely, optimal solutions for a variety of applications in the healthcare, consumer and industrial markets. Continuous product innovation, vast technological resources, commitment to quality and dedication to customers are what distinguish Porex in the marketplace.

POREX STANDARD WARRANTY

Porex Corporation ("Porex") warrants its products will meet their applicable published specifications when used in accordance with their applicable instructions for a period of one year from shipment of the products. POREX MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED. THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty provided herein and the data, specifications and descriptions of Porex products appearing in Porex's published catalogues and product literature may not be altered except by express written agreement signed by an officer of Porex. Representations, oral or written, which are inconsistent with this warranty or such publications are not authorized and if given, should not be relied upon.

In the event of a breach of the foregoing warranty, Porex's sole obligation shall be to repair or replace, at its option, the applicable product or part thereof, provided the customer notifies Porex promptly of any such breach. If after exercising reasonable efforts, Porex is unable to repair or replace the product or part, then Porex shall refund to the customer all monies paid for such applicable product or part. POREX SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR ANY OTHER DAMAGES RESULTING FROM ECONOMIC LOSS OR PROPERTY DAMAGE SUSTAINED BY ANY CUSTOMER FROM THE USE OF ITS PRODUCTS.



Seal		Filler	
N	None	N	None
E	Ethylene Propylene	A	Anti-Microbial*
S	Sil		
V	Vit		
F	FEP		
B	Buna		

* Available soon.

Operating Parameters

All POREX Radial Cartridge Filters are available in multiple end configurations to fit standard and commercial housings.

Parameter	Description
Media	HDPE (High-Density Polyethylene), UHMWPE (Ultra-High Molecular Weight Polyethylene)
Cage/Core	Polypropylene
Endcaps	Polyurethane or Polypropylene
Outside Diameter	2.65" (6.7 cm) 4.5" (11.4 cm) 6.1" (15.5 cm)
Inside Diameter	1.0" (2.5 cm) on 2.65" (6.7 cm) 1.0" (2.5 cm) on 4.5" (11.4 cm) 2.0" (5.1 cm) on 6.1" (15.5 cm)
Maximum Operating Temperature	80°C (176°F)
Pressure Rating	Forward 50 psid - 2.65" 35 psid - 4.5" and 6.1" in diameter
Effective Surface Area (10" Pleated Length)	1.7 ft ² (.16 m ²) per 2.65" (6.7 cm) 3.7 ft ² (.35 m ²) per 4.5" (11.4 cm) 6.5 ft ² (.62 m ²) per 6.1" (15.5 cm)

Typical Applications



Coatings
Paint, Inks, Resin

Refineries
Catalyst Recovery Clarification

Food and Beverage
DE or Ion Exchange Septum, DE Trap, Prefiltration, Bulk Loading

Pulp and Paper
White Water, Resin, Waste Water

Water and Waste Water
RO Prefilter, UF/NF Prefilter, Cooling Towers, Scrubber Water

Hydraulic
Lube Filter

Metal Finishing
Cutting Fluids, Waste Reduction

Automotive
Paint and Machine Tools

Oil and Gas
Water Flood, Completion Fluid, Amine, Glycol

Microelectronics
CMP, RO Prefilter, Photoresist, Stripper, PCB, PVA, CRT Coating

Pharmaceutical
Syrups, Ophthalmics, RO Prefilter

Cosmetics
Makeup



Sintered High-Density or Ultra-High Molecular Weight Polyethylene

Rigid, Omni-Directional Pore Structure:

High Performance Ratings

Advantage: Consistent pore structure minimizes performance changes caused by differential pressure

Benefit: Reproducible performance

Narrow Pore Size Distribution

Advantage: Highly effective surface filtration for particles larger than the filter pore size rating

Benefit: Allows for effective cleaning, backwash and reuse

Thermally-Bonded

Advantage: Sintered omni-directional pore structure

Benefit: No media migration, bypass or unloading from 5 to 100 microns

Excellent Chemical and Thermal Compatibility*

Advantage: High chemical resistance

Benefit: No chemical degradation resulting in bypass or contamination of the process fluid

Advantage: Completely incineratable with a high BTU output

Benefit: No incineration residue

* End cap compatibility should be confirmed by user.

Unique, Molded Radial Design:

High Surface Area

Advantage: Low pressure drop and higher flow rate

Benefit: Increased life or fewer filters result in lower filtration costs

Open Channels

Advantage: Easy access to filtration area

Benefit: Effective filtration and cleaning

Single-Layer Structural Media

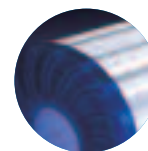
Advantage: Eliminates unnecessary support materials

Benefit: Improves backwash and cleanability

Rigid, One-Piece Construction

Advantage: Multiple diameters, lengths and end configurations

Benefit: Easily adapts to existing filtration systems



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POREX

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