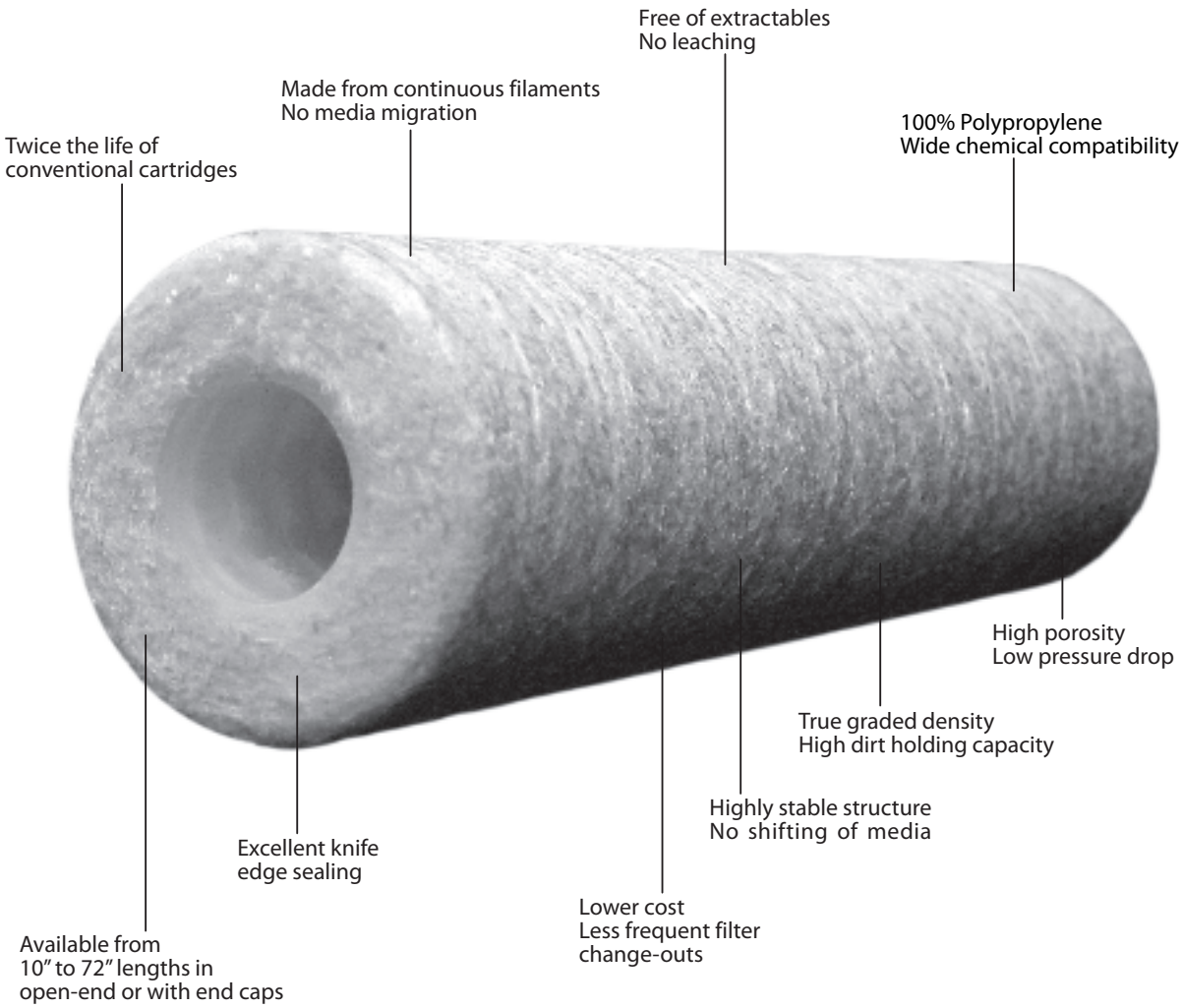
Sedifilt®

STRING-WOUND FILTER CARTRIDGES



Superior Filtration Technology

Sedifilt®

True Depth Filtration

Sedifilt depth filters have revolutionized filtration with a superior technology that overcomes the limitations and drawbacks of other filters.

Superior Filtration Technology

Sedifilt technology produces superior depth filters with increased filtration capacity, longer lifetime, and higher performance that reduce overall costs. Sedifilt filters have high structural integrity combined with a greater void volume, giving a lower pressure drop, much improved dirt holding capacity and efficiency compared to conventional filters. Sedifilt filters are made of polypropylene, a recognized environmentally safe and recyclable material for purity and ease of disposal.

Features

No chemicals to leach-out with new melt spinning and yarn forming process.

No media migration because the yarn consists of continuous filaments.

True graded density – new winding technology gives denser winding in inner layers and coarser winding in outer layers.

High dirt holding capacity and longer life as particles are trapped throughout the entire cross section of the filter.

Better performance – multi-lobal cross section filaments with random 3-dimensional media structure captures more particles compared to conventional filters.

High bulk media having improved void to solid ratio gives higher flow rates with low pressure drop.

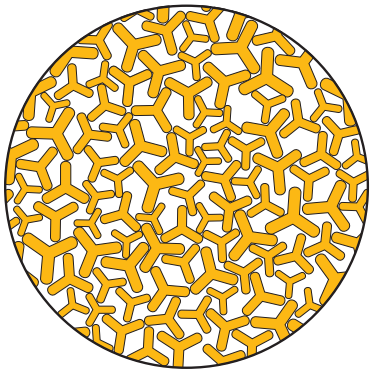
100% polypropylene - wide chemical compatibility and excellent micro-organism resistance.

High structural stability, i.e. no shifting of media, excellent knife-edge sealing.

Firmer structure gives improved resistance to particle unloading and more consistent performance.

Incinerates to trace ash with no hazardous volatiles for environmentally friendly disposal.

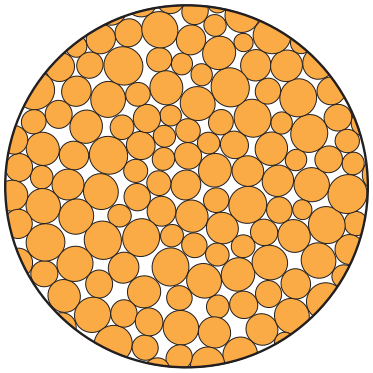
Sedifilt multi-lobal cross section of individual filaments has more micro-voids giving higher dirt holding capacity and lower resistance to flow.



Sedifilt Media

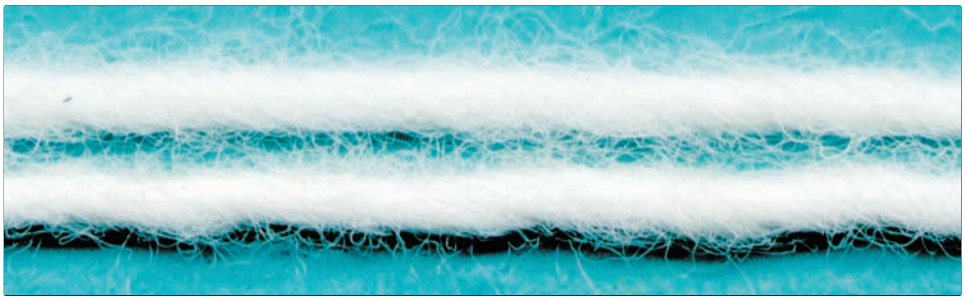
High bulk, stable, three-dimensional random structure comprising continuous filaments.

Conventional round cross section of individual fibres has fewer micro-voids giving lower dirt holding capacity and higher resistance to flow.



Conventional Media

Low bulk, non-stable, round structure comprising short fibres.



How it Works

The patented Sedifilt process begins with 100% pure polypropylene that is melt-spun (extruded) without the use of any chemicals. The extruded media consists of continuous filaments of multi-lobal cross-section with numerous micro voids between each individual filament. These chemical-free continuous filaments are then randomly oriented to each other, intermixed, looped and entwined into a non-round, highly stable, bulky yarn. The multi-lobal cross-section of filaments combined with the random yarn structure gives much improved void to solid ratio. This improved porosity gives a higher dirt holding capacity and reduced resistance to flow.

When this media is wound into a filter cartridge, each of the filaments continues, without a break, throughout the length of the yarn, making the cartridge free from any media migration problem. There are no short fibers that can come lose and migrate, a common problem with conventional string-wound filters. Each yarn also traps the randomly protruding short loops of adjacent yarns resulting in a highly stable media structure wherein the yarns are locked in place and prevented from rolling or shifting aside. The stable structure provides an excellent knife-edge sealing property to the cartridge. Under conditions of varying flow and pressure fluctuations, the new cartridge is more resistant to particle unloading.

With the improved media, there are no typical diamond-shaped open spaces (a characteristic winding pattern of typical string-wound media) and the yarn media covers all the area. The liquid flows through the entire yarn structure and contaminant particles are forced to change direction as they proceed through the depth of the cartridge. The physics of flow is such that it becomes possible to trap particles smaller than the size of the complex pathways.

Finally, through improved winding technology, the pitch, number of crossings and space between each yarn is continuously varied and controlled from start to finish in making the cartridge. The inner layers of the yarns are wound close together and the space between yarns is gradually increased towards the outer layers, while the yarns remain locked together because of the random protruding loops. This winding technology gives improved true density grading, trapping coarser particles in the outer layers and finer particles in the inner layers. By maintaining the same winding tension, the structure has the same firmness throughout the depth of the cartridge, giving more consistent and better performance.

Sedifilt test results have shown that this patented process provides up to twice the dirt holding capacity and filter life at equivalent competitive efficiencies, while reducing pressure drop up to half. All this translates into improved filtration performance and reduced costs.

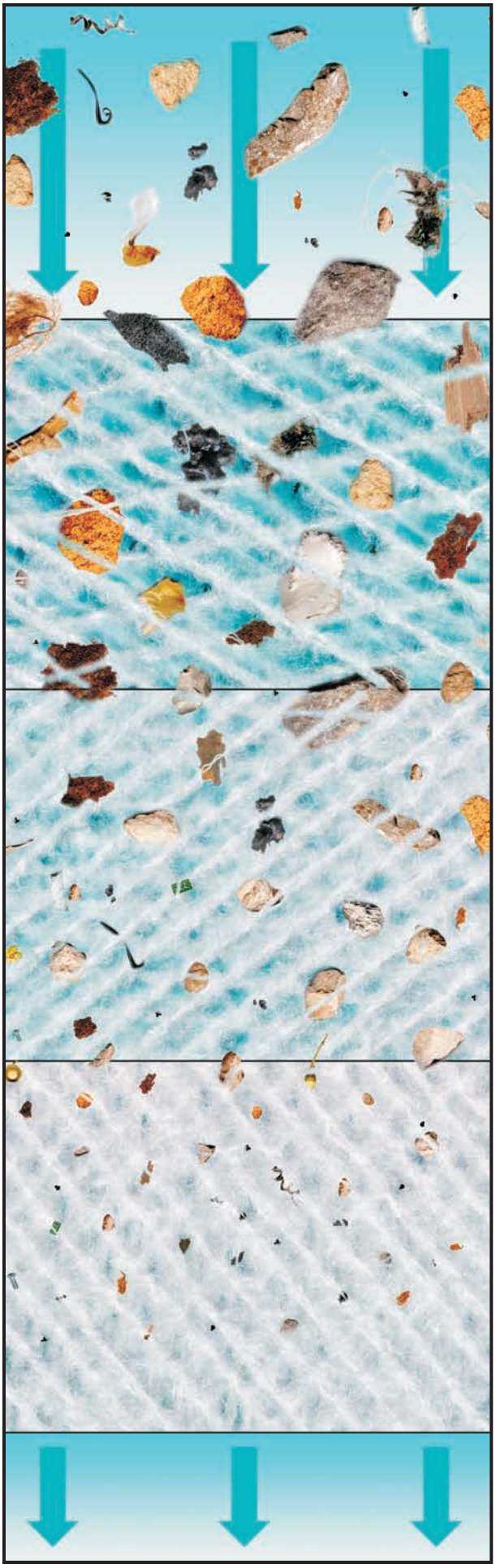


Illustration: Sedifilt graded density structure

Extractable-Free Media

Pure polypropylene Sedifilt filter cartridges are free from any extractables and contain no lubricants, wetting agents, emulsifiers, ant-oxidants or anti-static agents, etc. They are suitable for use in applications like RO pretreatment (SDI reduction), drinking water and beverage processing, sea water desalination, gas purification, electronics and electroplating, photographic solutions, oil and gas production (deep well injection of produced water and wastewater disposal), cooling tower water filtration, etc.

The standard pure polypropylene cartridge is extractable-free and engineered for superior filtration performance. It has been certified by NSF International to NSF/ANSI Standard 61 for Drinking Water System Components.

Available in up to 72 inch (1829 mm) length and 6 inch (152 mm) diameter.

Polyester Media

Polyester media filter cartridges with stainless steel core are also available for applications where their temperature and chemical resistance is more suitable; e.g. for filtration of edible and petroleum oils, etc.

Strainer Cartridge

Pure polypropylene strainer cartridge for filtering out large contaminants can be back flushed for longer service life. The unique filter media consisting of continuous monofilaments, is free from media migration, has high dirt holding capacity and low pressure drop. It incinerates to trace ash without harm to the environment.

Cotton Media

Cotton media cartridges with stainless steel or galvanized carbon steel core are also available for applications where their temperature and chemical resistance is more suitable in filtration of edible and petroleum oils, organic solvents, etc.

Natural cotton cartridge with galvanized carbon steel core for oils, paints, organic solvents, alcohols, petroleum and other non-food applications (for use up to 130 °C).

Bleached cotton cartridge with stainless steel core meets food standards for use up to 130 °C. For distilled water, beverages, vegetable oils, petroleum, fatty acids, and alcohols.

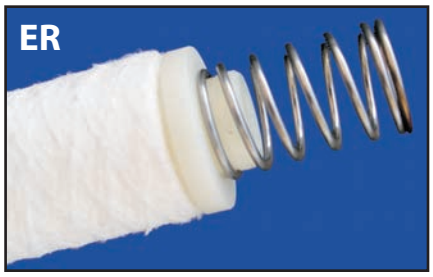
End Adapters

All end adapters are thermally-welded to the pure polypropylene Sedifilt filter. The positive weld assures bypass-proof performance and structural integrity without adhesives or additives, maintaining cartridge purity. All adapters are molded of the same polypropylene as the cartridge for chemical compatibility, ease of disposal, and to comply with requirements for food and beverage contact.

Pure polypropylene molded adapter with "222" O-rings (E226 , E229 and other O-ring adapters are also aavailable).

Pure polypropylene closed end cap forms a complete seal.

Stepped end configurations available in all media.



Reusable knife-edge seal end cap with stainless steel spring.

Pure polypropylene molded spring.

Pure polypropylene molded fin end cap.

Extended Cores

Pure polypropylene extended core.

Pure polypropylene tapered extended core.

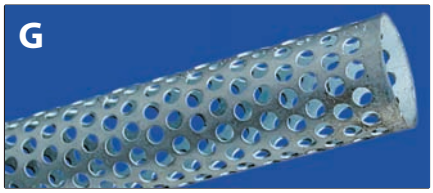
Stainless Steel tapered extended core.

Filter Cores

Filter cores are available in polypropylene, stainless steel (304/316L) and galvanized carbon steel, in regular and extended configurations.

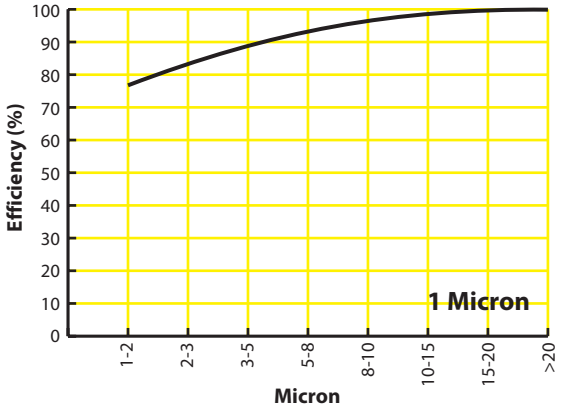
Polypropylene core is the economical choice for most applications.

Stainless Steel core extends chemical, temperature, and delta P limits of cartridge. Recommended for higher temperature applications, for oils, acids and other corrosive fluids, as well as food and beverages.

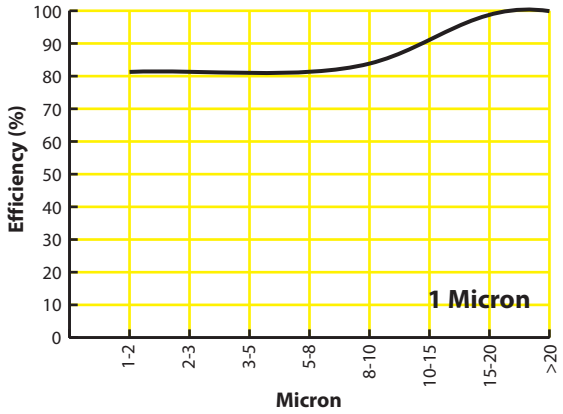


Galvanized Carbon Steel core is a general purpose core for oils, solvents, paints and other non-food applications.

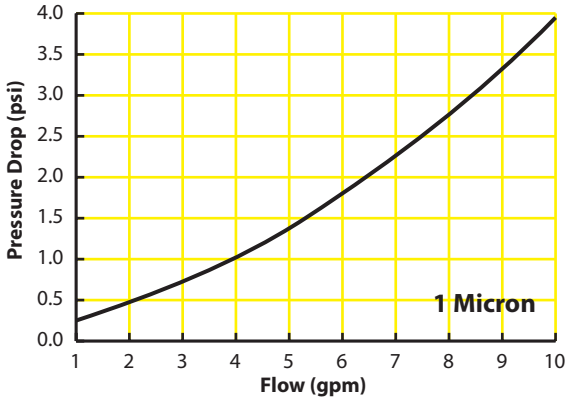
1 micron, 10" Polypropylene Cartridge
Initial Efficiency



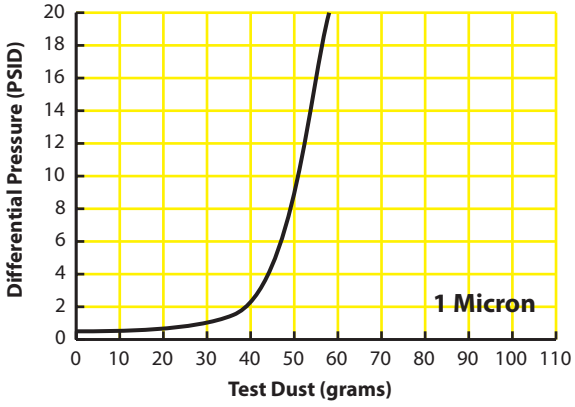
Final Efficiency



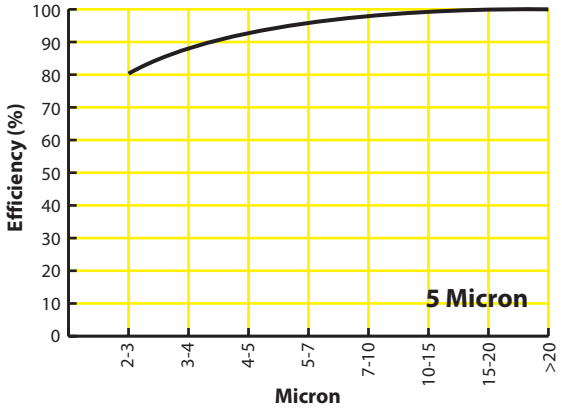
Pressure Drop vs. Flow Rate



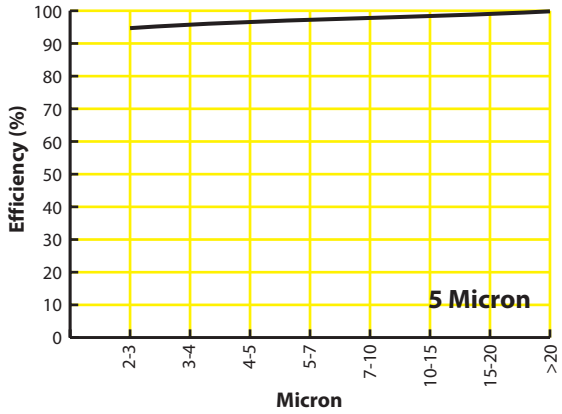
Dirt Holding Capacity



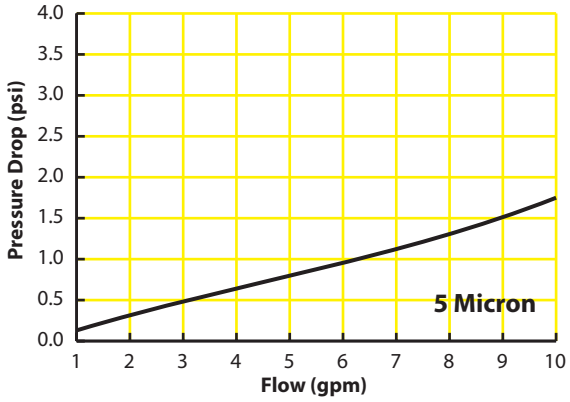
5 micron, 10" Polypropylene Cartridge
Initial Efficiency



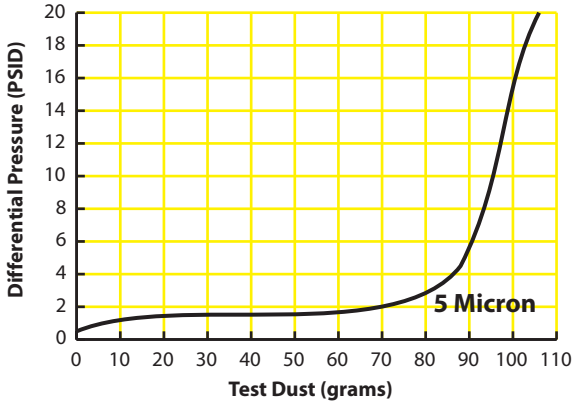
Final Efficiency



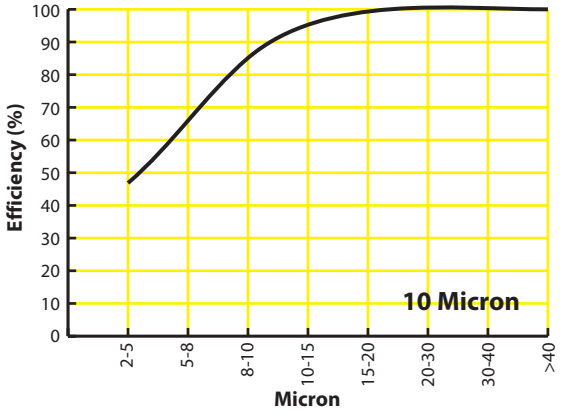
Pressure Drop vs. Flow Rate



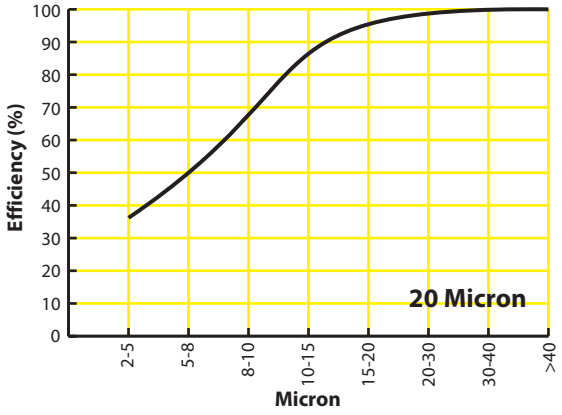
Dirt Holding Capacity



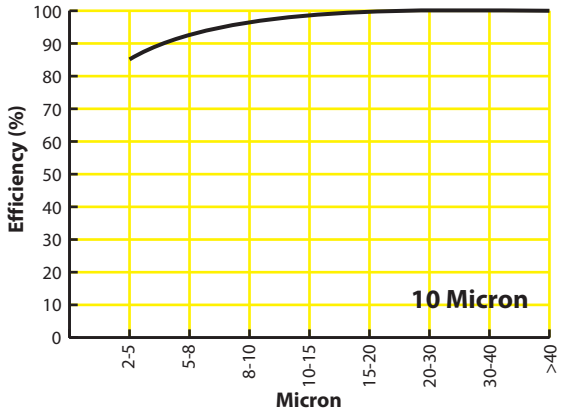
10 micron, 10" Polypropylene Cartridge Initial Efficiency



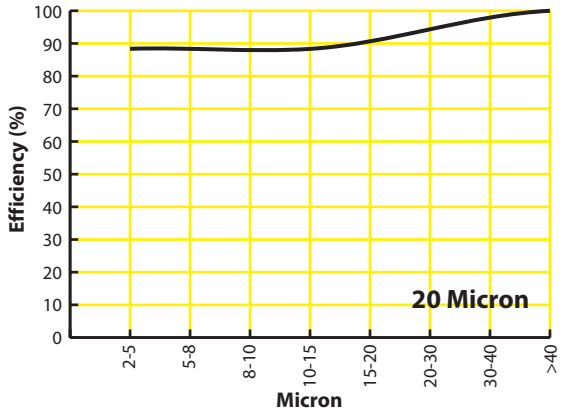
20 micron, 10" Polypropylene Cartridge Initial Efficiency



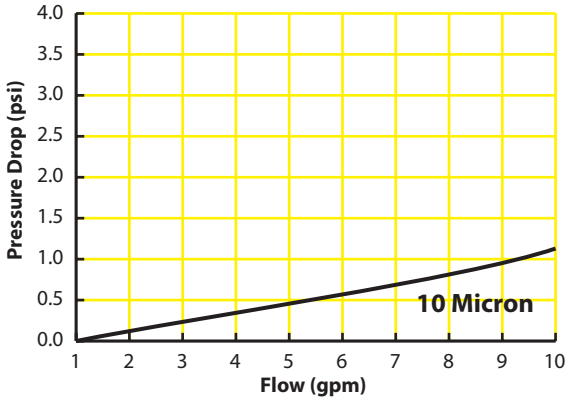
Final Efficiency



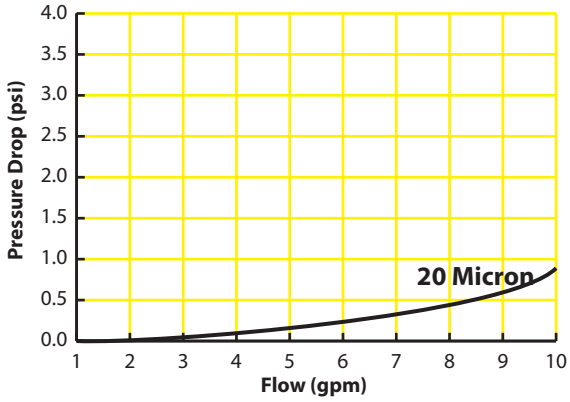
Final Efficiency



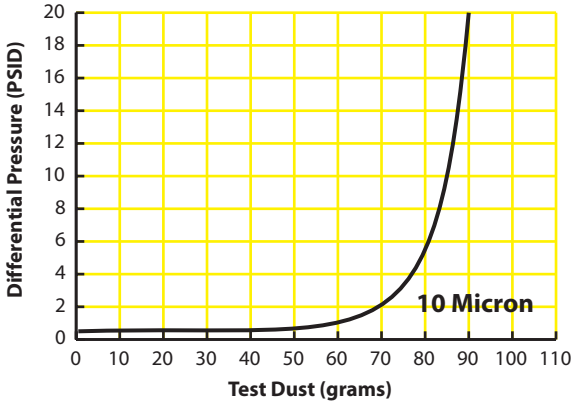
Pressure Drop vs. Flow Rate



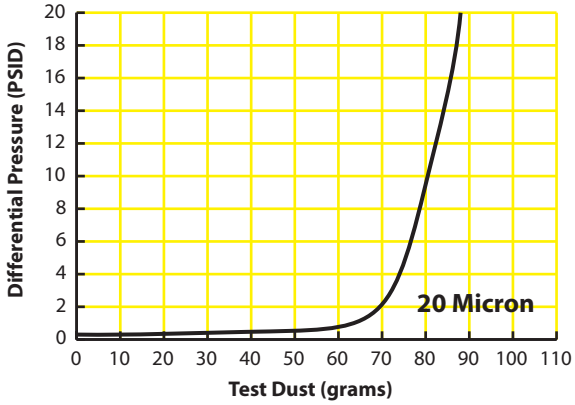
Pressure Drop vs. Flow Rate



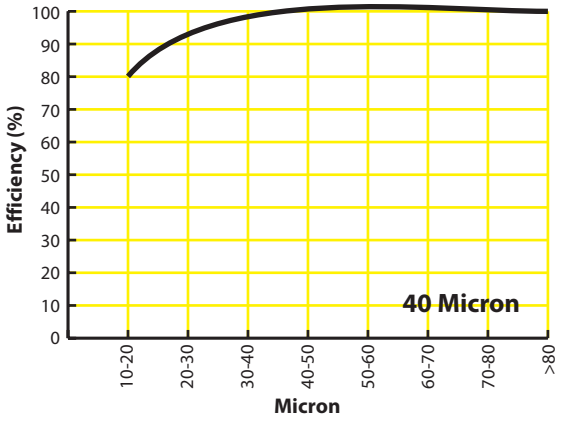
Dirt Holding Capacity



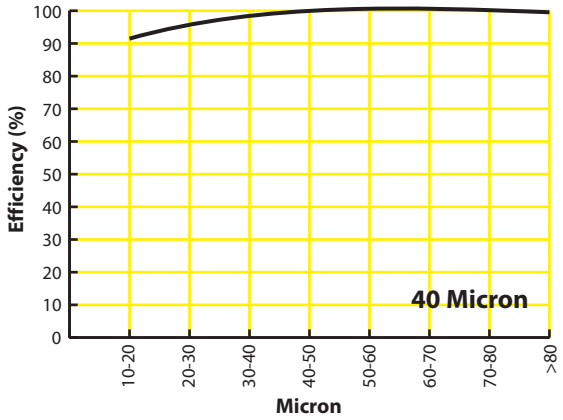
Dirt Holding Capacity



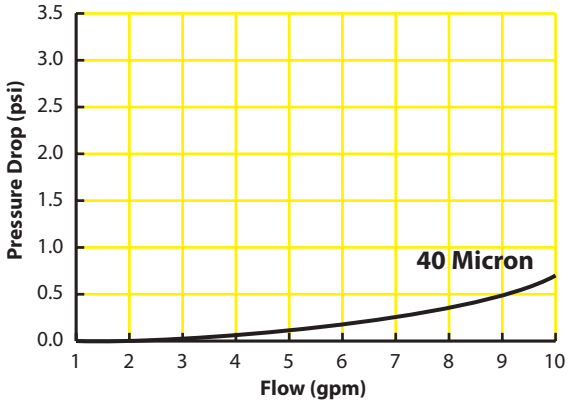
40 micron, 10" Polypropylene Cartridge
Initial Efficiency



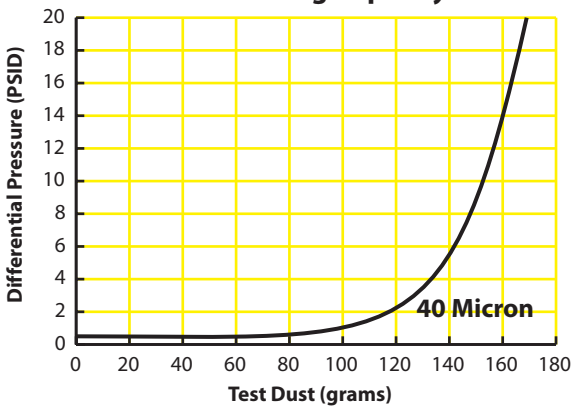
Final Efficiency



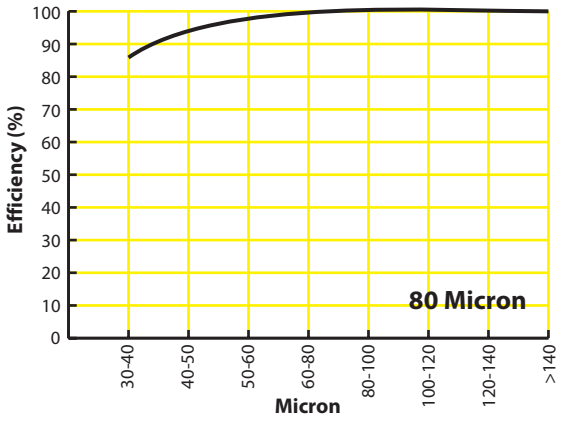
Pressure Drop vs. Flow Rate



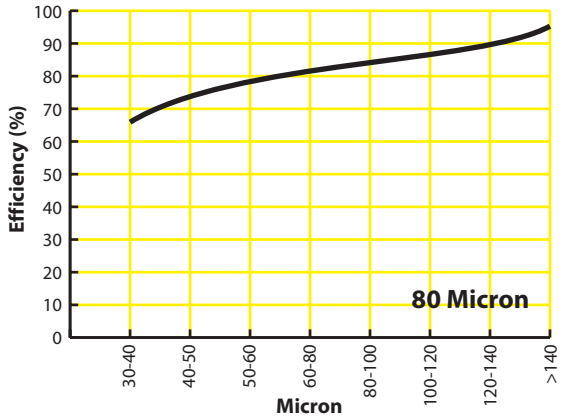
Dirt Holding Capacity



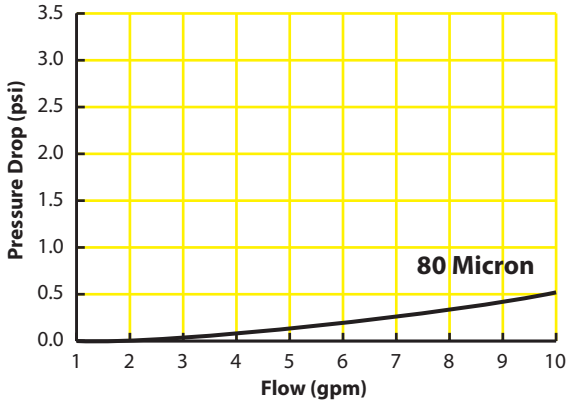
80 micron, 10" Polypropylene Cartridge
Initial Efficiency



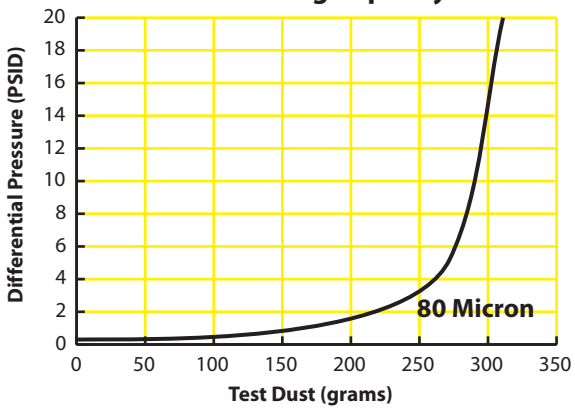
Final Efficiency



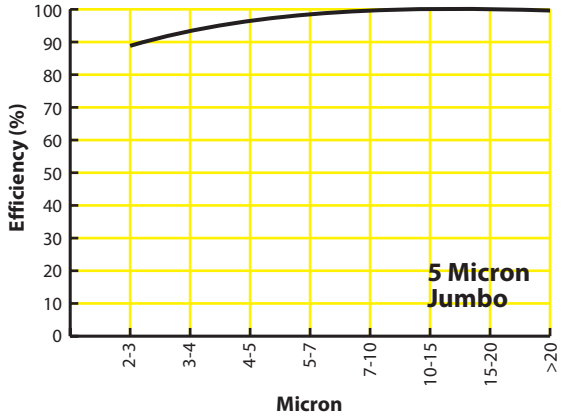
Pressure Drop vs. Flow Rate



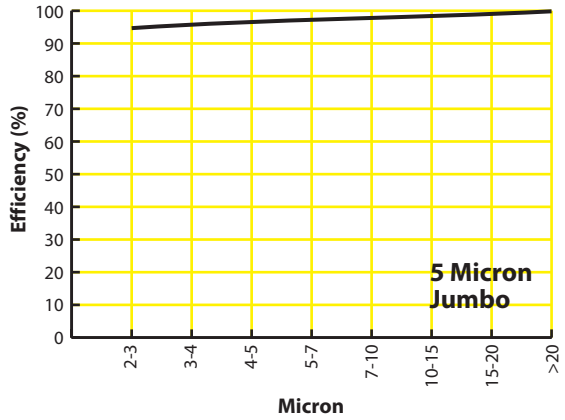
Dirt Holding Capacity



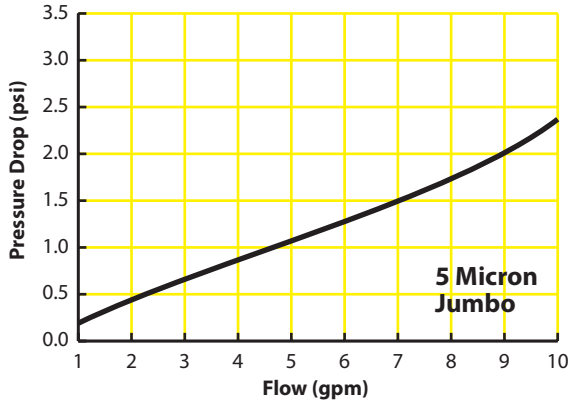
5 micron, 10" Polypropylene Jumbo Cartridge
Initial Efficiency



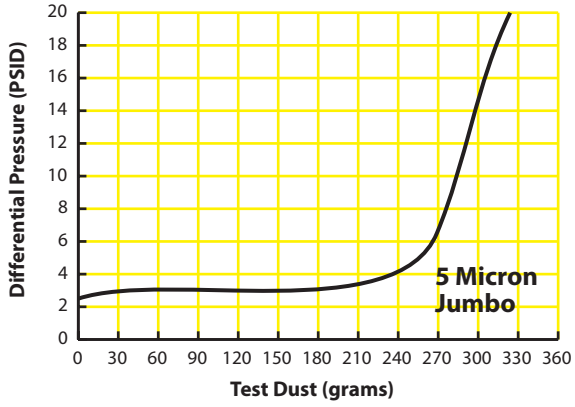
Final Efficiency



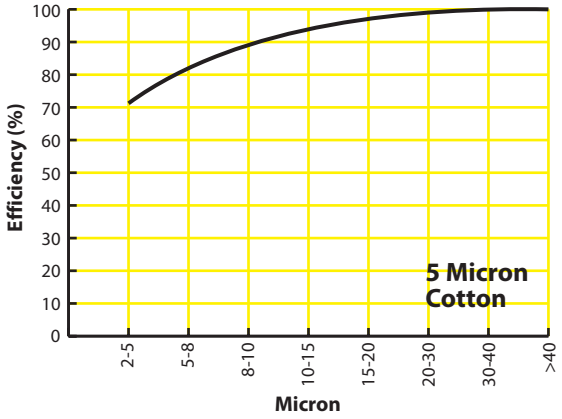
Pressure Drop vs. Flow Rate



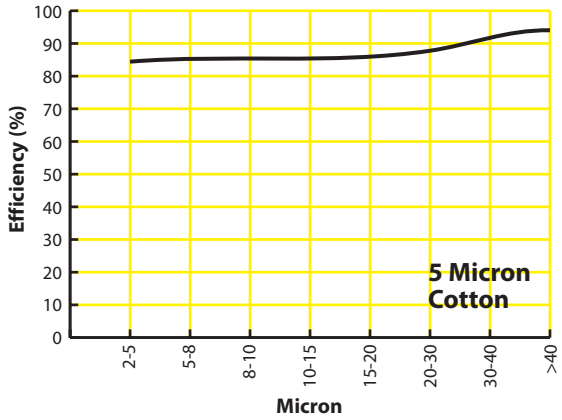
Dirt Holding Capacity



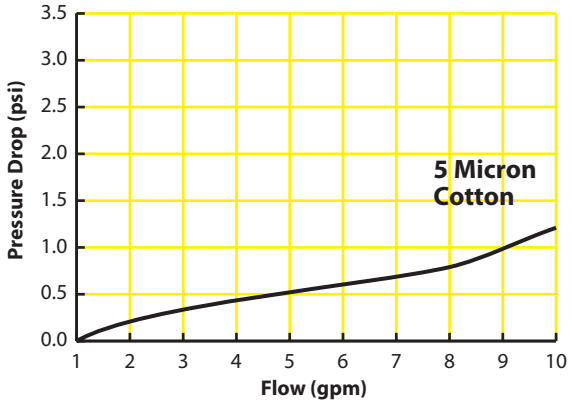
5 micron, 10" Cotton Cartridge
Initial Efficiency



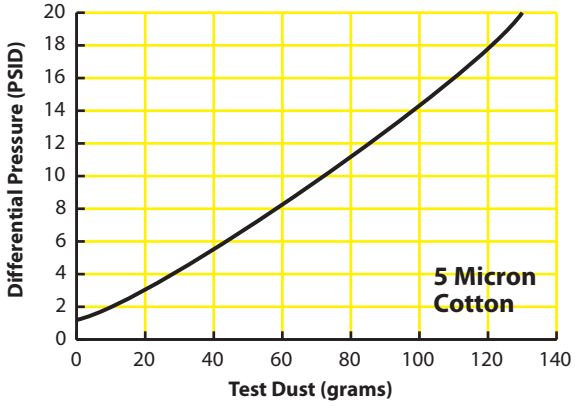
Final Efficiency



Pressure Drop vs. Flow Rate



Dirt Holding Capacity



Test Method

Ratings are based on laboratory tests for 10 inch cartridges as per ASTM F795 specifications at ambient temperature and 3 gpm (US) water flow rate. Flow rate vs. pressure drop data is based on clean water at an ambient temperature of 25 °C. Results in actual use will be influenced by the type of fluid and contaminant as well as flow rate and temperature.

1 Micron

Test: Initial Efficiency per ASTM F795-88
Instrumentation: M-count 05 SN 96070109
Contaminant: ISO A2 (Fine)
Shut Off **D**P: 30 PSI

5 Micron

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: LD 400 S/N 95020054
Contaminant: ISO Fine Test Dust
Shut Off **D**P: 20 PSI

10 Micron

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: LD 400 S/N 95020054
Contaminant: ISO Coarse Test Dust
Shut Off **D**P: 30 PSI

20 Micron

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: LD 400 S/N 95020054
Contaminant: ISO Coarse Test Dust
Shut Off **D**P: 20 PSI

40 Micron

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: LD 400 S/N 95020054
Contaminant: ISO Coarse Test Dust
Shut Off **D**P: 30 PSI

80 Micron

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: LD 400 S/N 95020054
Contaminant: ISO Coarse Test Dust, sieved for efficiency points
Shut Off **D**P: 30 PSI

5 Micron Cotton Cartridge

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: M-count 05 SN 95020054
Contaminant: ISO Fine Test Dust
Shut Off **D**P: 30 PSI

5 Micron Jumbo Cartridge

Test: Retention Efficiency and Capacity per ASTM F795
Instrumentation: LD 400 S/N 95020054
Contaminant: ISO Fine Test Dust
Shut Off **D**P: 20 PSI

Food Grade Compliance

Standard Sedifilt cartridge filters are made from 100% homopolymer polypropylene resin that meets requirements for food, beverages and drinking water, etc.

Chemical Compatibility

Please consult our Chemical Resistance Guide for chemical compatibility information on our filter media and core material.

NSF/ANSI Standard 61 Certification

Sedifilt polypropylene filter cartridges are certified by NSF International to NSF/ANSI Standard 61 for Drinking Water System Components.

Applications

Sedifilt cartridges are ideally suited for applications such as: RO pre-filtration, electronics manufacture, deep well injection & gas purification, ED automotive paint, electroplating, pharmaceuticals & healthcare, chemical industry, metal working, industrial process water, drinking water, food & beverage, residential water and more.

Ordering Information

Sedifilt cartridges can also be made to order in customized sizes (I.D, O.D, and lengths) in various filter media and core material.

Sedifilt Filter Cartridge		Number per box (standard packing)	Gross weight per box (kg)	Quantity per 20 ft. Container Load (non-palletized)	Quantity per 20 ft. Container Load (On Pallets)
Length	Outer Diameter				
10″	2 ½″	30	6	25200	19500
20″	2 ½″	30	11	12600	9750
30″	2 ½″	30	16	8400	6480
40″	2 ½″	20	14.5	6300	4880
50″	2 ½″	20	18	5040	3900
72″	4 ½″	4	17	1240	960

When ordering for the first time, please specify all details in writing. Media, actual length, micron rating, outer and inner diameters, and core material are required. End adapters are optional. Contact us for further information.

S L 40 A – 5 A E222/C - G 35

Media	Length			Variation in Length	Micron Rating (nominal)	Outer Diameter (mm)	End Adapters	Core Material
	Nominal	Actual						
None = Extractables Free Polypropylene	**(inch)**	(inch)	(mm)	None = Nominal Length	**1**	**A** = 63.5	**E222/C** = Two end caps, one with double 222 O-rings (**E222**), other end flat closed (**EC**)	None = 100% Polypropylene
L = Low Extractables Polypropylene	**10**	9 7/8	250.8	**A** = Specified Length	**5**	**E** = 60	**E222** = Double 222 O-rings end cap	**S** = Stainless Steel 304/316L
P = Polyester	**20**	19 3/4	501.7	Actual length of standard nominal lengths is specified on the left. For custom lengths, specify length in inches followed by an A for variation in length from standard.	**10**	**D** = 100	**EC** = Closed end cap	**G** = Galvanized Carbon Steel
B = Bleached Cotton	**30**	29 5/8	752.5		**20**	**J** = 114.5	**ES** = Stepped end	
C = Natural Cotton	**40**	39 1/2	1003.3		**40**		**ER** = Reusable stainless steel spring	
D = Strainer Cartridge	**50**	49 1/4	1251.0		**80**		**EA** = Polypropylene molded spring	
	72	72	1828.8				**EF** = Polypropylene molded fin end cap	
							EM = Metal end cap with gasket	**Inner Diameter**
							X = Extended Core	27 mm 35 mm
	Custom lengths are available up to full 72 inches. Length does not include end adapter length, if any.					Custom outer diameters are available up to 152 mm.	**XT** = Tapered Extended Core (all core media) None = No end adapters (double open end - DOE)	Polypropylene cores are available in 27 and 35 mm inner diameter. Custom inner diameters are available in metal cores.

For a standard Sedifilt 5 micron 40 inch long (nominal) filter cartridge the product code will be S40-5A.

An example of a cartridge with all options specified is SL40A-5AE222/C-G35.

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