Sedifilt®

String-Wound Filter Cartridges

True depth cartridges for a wide range of industrial, commercial, & domestic applications

WATER

RAW WATER

CHEMICALS

HYDROCARBONS

Superior Filtration Technology

Superior Filtration Technology

The patented Sedifilt process begins with 100% pure polypropylene that is 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.

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

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.

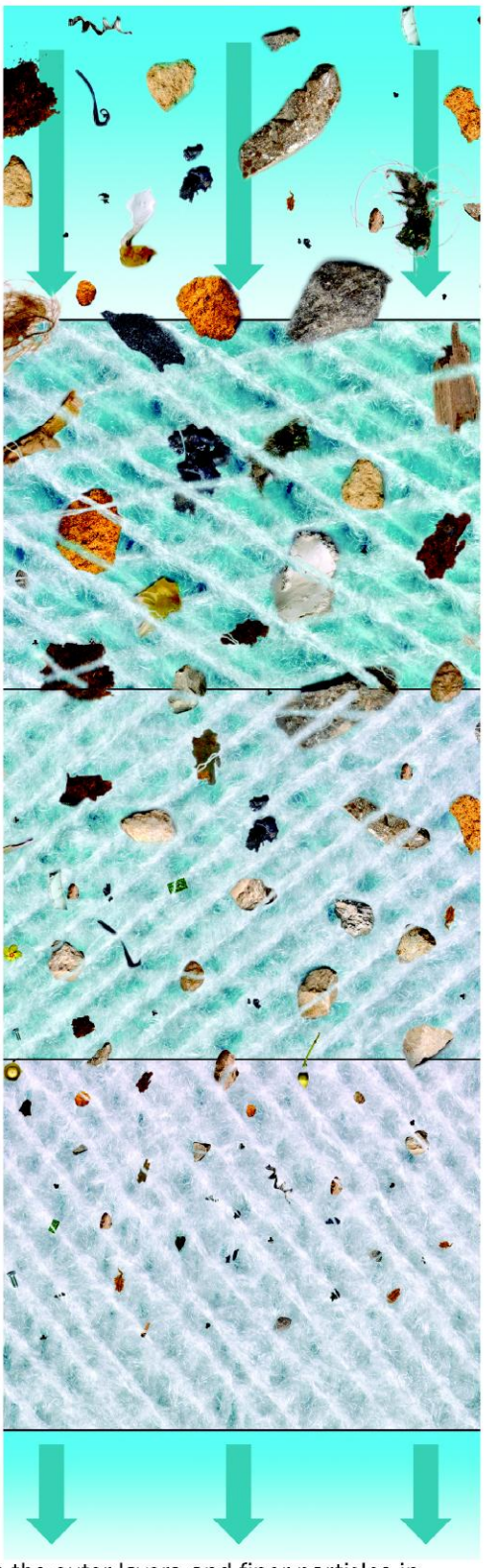


Illustration: Sedifilt graded density structure

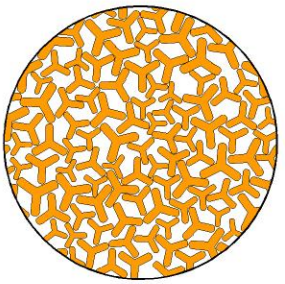
Features

- **100% polypropylene –** inert material, excellent micro-organism resistance.
- **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.
- **High structural stability**, i.e., no shifting of media, excellent knife-edge sealing.
- **Structural firmness** results in greater resistance to particle unloading and hence more consistent performance.
- **Incinerates to trace ash** with no hazardous volatiles for environmentally friendly disposal.

True graded density structure of Sedifilt cartridges ensure higher dirt holding capacity, longer service life, and fewer change outs.

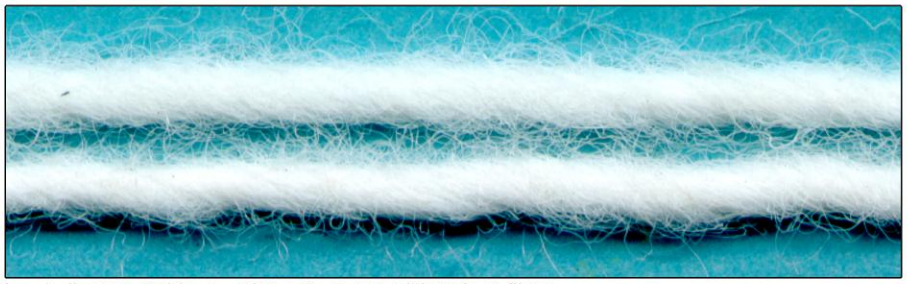
Sedifilt Media

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

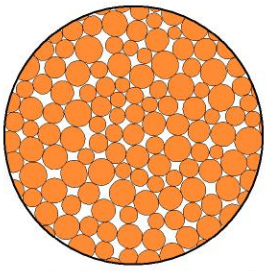


The multi-lobal cross section of individual filaments has more micro-voids giving higher dirt holding capacity and lower resistance to flow.

Conventional Media



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

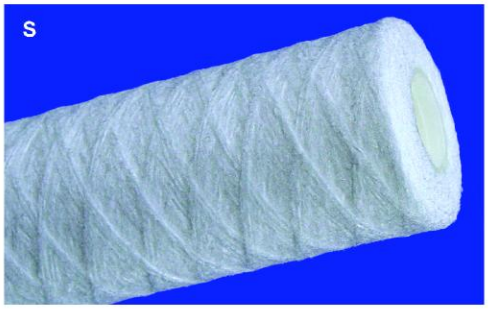


Conventional round cross section of individual fibres has fewer micro-voids giving lower dirt holding capacity and higher resistance to flow.

NSF/ANSI Standard 61 Certification

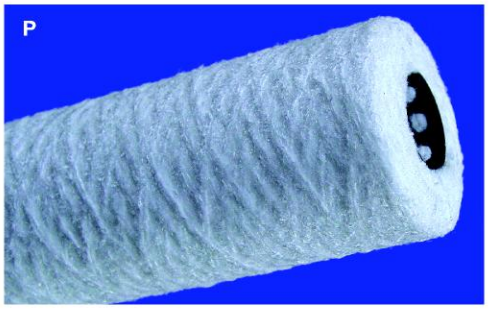
Sedifilt polypropylene filter cartridges are certified by NSF International to NSF/ANSI Standard 61 for Drinking Water System Components and Health Effects.

Filter cartridges



Polypropylene Cartridge

Pure polypropylene Sedifilt filter cartridges are free from any extractables and contain no lubricants, wetting agents, emulsifiers, ant-oxidants or anti-static agents, etc. It is certified by NSF International to NSF/ANSI Standard 61 for Drinking Water System Components and Health Effects. Available in up to 72 inch (1829 mm) length and up to 6 inch (152 mm) diameter.

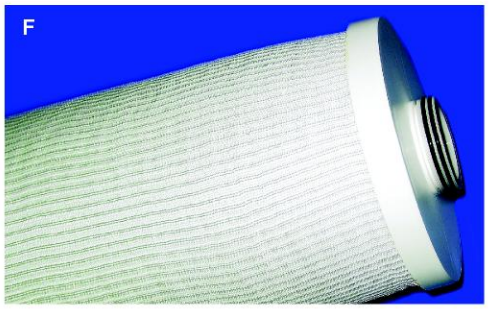


Polyester Cartridge

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

RO Cartridge

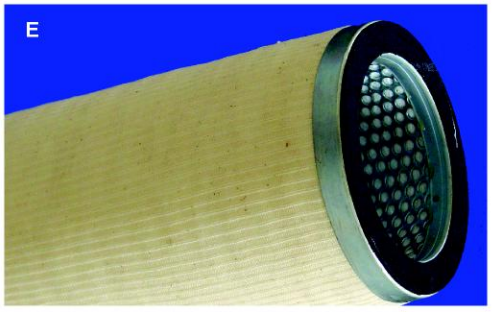
Sedifilt Cartridge for Reverse Osmosis Plants are effective and efficient for removal of silt, sand, rust and other suspended particles from RO feed water.



High Flow Cartridge

Designed for High Flow housings and applications like large RO plants, produced water filtration, amine and glycol filtration. The Sedifilt High Flow filter cartridge has a 6-inch diameter, giving four times higher dirt holding capacity together with lower differential pressure and higher flow rates.

Available in standard Polypropylene and Polyester media with stainless steel core, and cotton or polypropylene covering.



Coalescer Cartridge

Sedifilt Coalescer cartridges reduce cost of filtration with enhanced performance, and is ideal for condensate removal and oil adsorption in both liquid/liquid and liquid/gas applications. The high-bulk, stable, three-dimensional random structure comprising multi-lobal filaments results in direct interception and coalescence of dispersed liquid phase. Applications include removal of aerosols, condensates and particulate contaminants from natural gas streams.

Pure polypropylene molded adapter with “222” O-rings

Thermally welded pure polypropylene closed end cap

Stepped end configurations available in all media

Reusable knife-edge seal end cap with stainless steel spring

Pure polypropylene molded spring

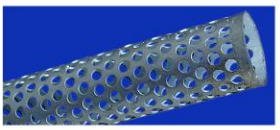
Pure polypropylene molded fin end cap

Pure polypropylene extended core

Pure polypropylene tapered extended core

Stainless Steel tapered extended core

Polypropylene core is the economical choice for most applications. Available in 28 and 35 mm inner diameters.



Stainless Steel core extends chemical, temperature, and differential pressure limits of cartridge.

Galvanized Carbon Steel core

Natural cotton cartridge with galvanized carbon steel core for oils, paints, organic solvents, alcohols, petroleum & 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

Polypropylene 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 and ease of disposal.

Filter Cores

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

Chemical Compatibility

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

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, e.g. in filtration of edible and petroleum oils, organic solvents, etc.

Food Grade Compliance

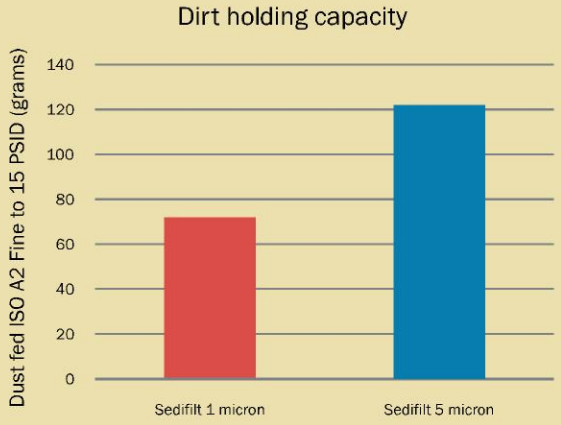
Standard Sedifilt filter cartridges are made from 100% homopolymer polypropylene resin that meets requirements for food, beverages and drinking water.

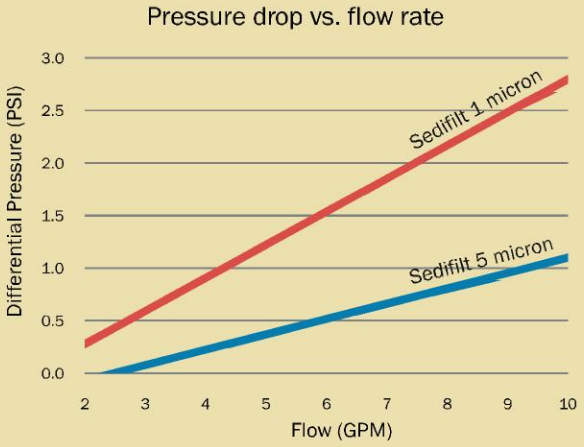
Applications

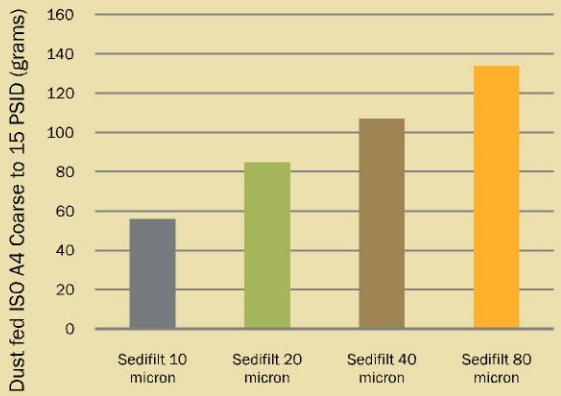
Sedifilt cartridges are ideally suited for applications such as: RO pre-filtration, electronics manufacture, deep well injection & gas purification, ED automotive paint, electroplating, pharmaceuticals & healthcare, chemical industry, metal working, industrial process water, drinking water, food & beverage,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

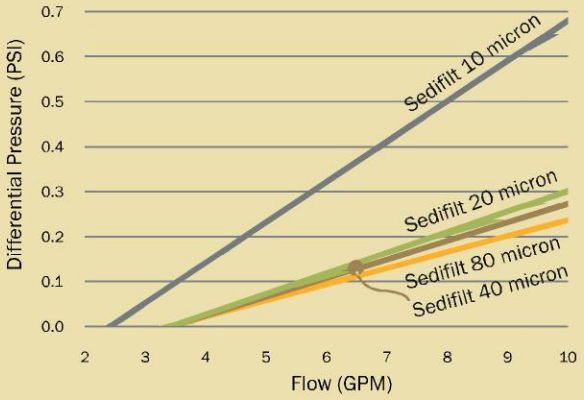
Customers can count on our continued commitment to research and development.

Filter Cartridge Test Results









Ratings are based on laboratory tests for 10 inch cartridges as per ASTM F795 standard 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.

We provide active support to customers towards the development and improvement of filter cartridges to meet process requirements. Our research and development efforts are to continuously improve our products. Our test laboratory enables us to provide customers with tailor made cartridges.

We conduct testing at our own in-house laboratory. Our laboratory is equipped with a filter cartridge test rig, laser particle counter, digital microscope, turbidity measuring instrument, SDI measurement instruments, microbiological and chemical test equipments.

Ordering information

Sedifilt filter cartridges can be made to order in custom sizes (custom lengths, inner diameter and outer diameter) in various filter media and core material, and tailored density gradings.

Length	Outer diameter	Number per box (standard packing)	Gross weight per box (kg)	Quantity in 20 ft. container load (without pallets)	Quantity in 20 ft. container load (on pallets)
10"	2 ½"	30	6	25,200	19,500
20"	2 ½"	30	11	12,600	9,750
30"	2 ½"	30	16	8,400	6,480
40"	2 ½"	20	14.5	6,600	5,120
50"	2 ½"	20	18	5,040	3,900

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.

Backup stocks are maintained in our warehouse for prompt deliveries. Packaging is in good quality top loading box-board cartons. Both palletized and non-palletized deliveries are made.

S P 40 A – 5 A E222/C - G 35

Media	Length			Variation in Length	Micron Rating (nominal)	Outer Diameter (mm)	End Adapter	Core Material
	Nominal	Actual						
None = Extractables Free Polypropylene	(inch)	(inch)	(mm)	**A =** Specified 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
P = Polyester	10	9 7/8	251	None = Nominal length	**5**	**E =** 60	**E222 =** Double 222 O-rings end cap	**S =** Stainless Steel 304/316L
B = Bleached Cotton	20	19 ¾	502		**10**	**D =** 100	**EC =** Closed end cap	**G =** Galvanized Carbon Steel
C = Natural Cotton	30	29 5/8	753		**20**	**J =** 114.5	**ES =** Stepped end	
D = Strainer Cartridge	40	39 1/2	1004		**40**		**ER =** Reusable stainless steel spring	Inner Diameter
E = Coalescer Cartridge	50	49 1/4	1251		**80**		**EA =** Polypropylene molded spring	27 mm
F = High Flow Cartridge	72	72	1829				**EF =** Polypropylene molded fin end cap	35 mm
RO = RO Cartridge	Custom lengths are available up to full 72 inches. Length does not include end adapter length, if any.					Customized outer diameters are available up to 152 mm.	**EM =** Metal end cap with gasket	Polypropylene cores are available in 27 and 35 mm inner diameter.
							X = Extended core	Custom inner diameters are available in metal cores.
							XT = Tapered extended core (all core media)	
							None = No end adapters (double open end – DOE)	

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

Syntech Fibres (Pvt) Ltd.

Filtration Products Division

5-3-1 Sector 15,
Korangi Industrial Area,
Karachi 74900, Pakistan

Phone: +92 21 38320203
+92 21 35061753
+92 21 35061044

Fax: +92 21 35060407

Email: **info@sedifilt.com**

Visit us on the Web at **www.sedifilt.com**

Sedifilt® ***Superior filtration technology***

The information given in this publication is based on the present state of our knowledge. Any conclusions and recommendations are made without liability on our part. Buyers and users should make their own assessment of our products under their own conditions and for their own requirements.

© Syntech Fibres (Pvt) Ltd. Sedifilt and the logo Sedifilt are registered trademarks of Syntech Fibres (Pvt) Ltd.

NSF® Certified by NSF International to NSF/ANSI Standard 61

URS UKAS QUALITY MANAGEMENT 043

MEMBER Water Quality® ASSOCIATION

3/2011 SM/01/004 Revision 7