



The following is a generalization of the properties for the three types of depth filter cartridges offered by SERFILCO. All are compatible with SERFILCO filtration systems. Performance results depend upon application, solution contamination, cartridge density, etc.

WOUND DEPTH TYPE

SERFILCO Depth Cartridges offer a new dimension in filtration. Wound to the highest specifications, they insure proper particle selections, increased solids holding capacity, less handling and lowest operating cost. Individual diamond pattern filters are laid one over the other to increase coarseness from the inside out, providing a uniform progression of density for flow from the outside in.

This effectively retains larger particles on the outer surface, finer particles on the inner surface. Thus, true depth filter media operates at peak solids holding capacity by distribution of the different particle sizes. Solids holding capacity is increased to the equivalent of many square feet of surface media.

This style cartridge is also suitable for operation at elevated temperatures at 30 to 40 psi pressure differential, as typically experienced in our larger Guardian and Sentry filtration systems. Particle retention ratings are from 0.5 to 100 micron.

This very versatile cartridge is available in cotton, polypropylene and Hi-Perf media with a variety of porosities to provide maximum dirt holding capacity and chemical compatibility with the liquid being filtered. Synthetic fibers, such as polypropylene, contain a soluble coating which must be flushed from the cartridge prior to use on certain plating applications such as nickel and acid copper. The coating is an anti-static agent required during manufacture of the fibers. It will cause pitting during plating if not adequately removed. The best removal method is to flush warm water through the cartridge. If a separate carbon chamber is available, then the warm water can be recirculated through the filter and carbon chamber and back to the slurry tank or another reservoir provided for the purpose. Once it is in use, the polypropylene cartridge can also be flushed with acid to remove iron which it has picked up during the filtration process. Cartridges made of cotton fibers do not contain the anti-static agent and can be employed on nickel solutions but cannot be regenerated with acid for iron removal.

POLYSPUN DEPTH TYPE

This cartridge is available only in polypropylene and is manufactured from continuous fibers thermally bonded and spun over a heated mandrel. Filter media is thereby built-up by several hundred layers of continuous melt bonded polypropylene on a self-supporting porous center support. As a result, Polyspun cartridges are not subject to fiber erosion and have little or no media migration or distortion under normal operating pressure differentials.

Polyspun cartridges are free of resins, binders, lubricants or anti-static agents and, therefore, do not require prewashing before use. The cartridges are used as pre-filters for DI water and reverse osmosis applications due to their low extractables and low rinse-up time. Particle retention ratings of 1, 5, 10, 20 and 30 micron are accurately maintained by precise specifications to insure quality performance. For aqueous solutions, a flow rate at or below 3 to 5 GPM per 10" cartridge is recommended. Maximum operating temperature is 140°F to 150°F, depending upon the solution and concentration. Polyspun cartridges can be disposed of by combustion since there is no metal center core. The actual method of disposal is dependent upon the solution being filtered and applicable laws.

PUREFYBE WOUND DEPTH TYPE

This cartridge is made from polypropylene film which is slit while under tension to create a net-like material. The media is then twisted to a coarse roving and wound in a diamond pattern on a polypropylene core to the desired particle retention. Purefybe cartridges are free of anti-static agents, lubricants and binders. The cartridge has a material firmness and smooth outer surface which renders it useful for rinsing and reuse in certain applications. Removal of iron precipitate from acid zinc plating baths is a typical example. It is also widely used in plating for electronics due to its excellent chemical resistance and high flow rate. The Purefybe is available in typical retention ratings from 1 to 50 micron.