



# Sentry™ Thermally Bonded Filters (Nominal Rated & Extended Life)



Sentry's Thermally Bonded Filter manufacturing process utilizes high quality media, closely monitored for uniformity and consistency. Thermally Bonded extended life and nominal rated filters offer exceptional cartridge life and virtually eliminate contaminant migration by utilizing a continuous fiber matrix construction.

Sentry's Thermally Bonded extended life and nominal rated cartridges are available in micron ratings of 1µm, 3µm, 5µm, 10µm, 20µm, 30µm, 50µm, and 75µm. They are true depth filters that give greater particulate control and longevity compared to competitive cartridge filters.

## The Sentry Solution for Liquid/Process Filtration

### Industry Uses & Applications

- Photographic
- Chemicals
- Food & Beverages
- Plating Solutions
- Coatings
- Potable Water
- Oil Field Fluids
- R.O. Prefiltration
- Process Water
- Chemical Processing
- Organic Solvents
- R.O. Prefiltration
- Membrane Protection

### Features & Benefits

- Graded density pore structure provides longer service life than other filters with uniform media
- Fine control of thermally bonded fiber size provides superior filtration and often eliminates the need for re-circulation to achieve product clarity
- No surfactants or binders to affect product quality or cause foaming
- Surface fiber construction is designed to prevent surface binding, increasing filter life
- DOE cartridges have polyolefin foam gaskets thermally welded to both ends, eliminating bypass
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- Thermally bonded melt blown fiber matrix provides consistent filtration throughout service life

### Design Properties

- Operating temperature to 160°F (70°C)
- Maximum pressure drop to 50 psid (3kg/cm<sup>2</sup>)
- Consistent performance due to continuous manufacturing process
- Bonded core structure for superior quality
- Pure 100% polypropylene for broad chemical compatibility
- Silicone free construction



# Sentry™ Thermally Bonded Filters (Nominal Rated & Extended Life)

## Nominal Filtration Ratings

- 90% efficiency at 1µm, 3µm, 5µm, 10µm, 20µm, 30µm, 50µm, and 75µm

## Materials of Construction

- Media: polypropylene 100% melt-blown
- Adapters/end caps (optional): polyolefin copolymer
- Seal options: various available, refer to ordering information

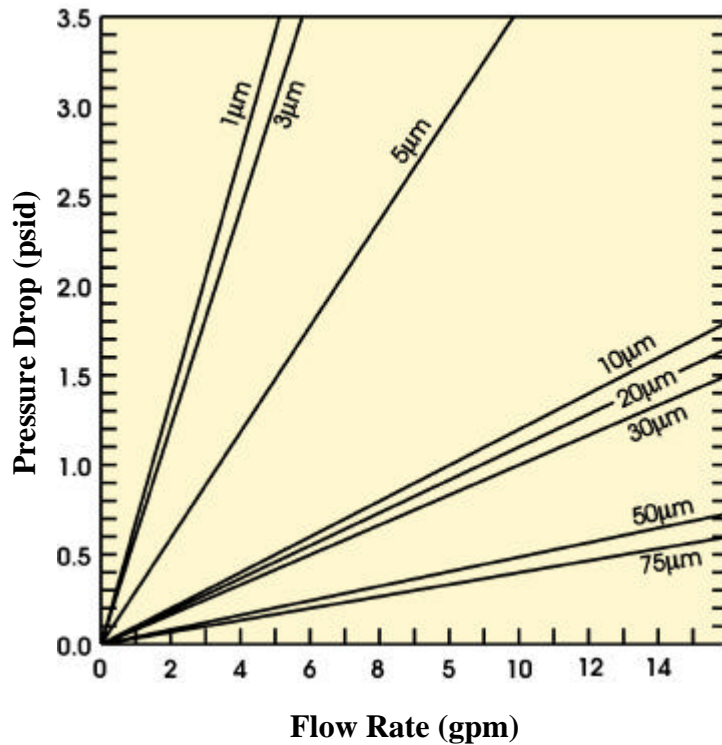
## Recommended Operating Conditions

- Change out ΔP (differential pressure): 30 psi (2.1 bar)
- Maximum Temperature:
  - @ 40 psid (2.7 bar) : 80°F (27°C)
  - @ 20 psid (0.8 bar) : 140°F (60°C)
- Maximum Recommended Flow Rate: 5 gpm per 10 in. length
- Maximum Operating ΔP @ Ambient Temperature: 40 psi (2.7 bar)

## Cartridge Dimensions

- 1 in. ID x 2 ½ in. nominal OD
- 10, 20, 30, and 40 inches continuous nominal lengths

## Flow Capacity (1 cps Liquid @ Ambient Temperature)

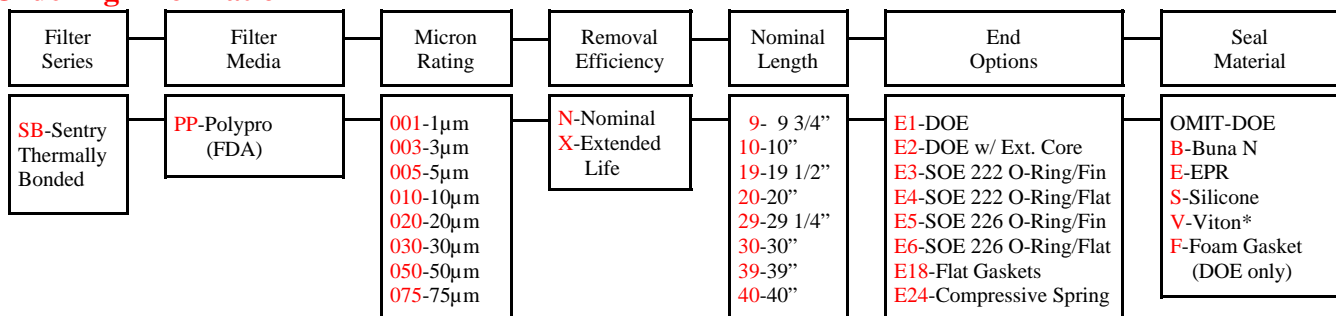


Beta Ratio ( $\beta$ ) =  $\frac{\text{Upstream Particle Count @ Specified Particle Size and Larger}}{\text{Downstream Particle Count @ Specified Particle Size and Larger}}$

$$\text{Percent Removal Efficiency} = \left( \frac{\beta - 1}{\beta} \right) \times 100$$

Performance determined per ASTM F-795-88. Single-Pass Test using AC test dust in water at a flow rate of 2.5 gpm per 10 in (9.5 lpm per 254 mm).

## Ordering Information



\* Trademark of E. I. du Pont de Nemours & Co.

©2001 Sentry® Filter. This document and other information from Sentry Filter, its subsidiaries, and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product literature. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is responsible for making the final selection for the products and systems assuring that all performance, safety, and warning requirements or the applications are met. The products described herein, including without limitation, product features, specifications, designs, availability, and pricing are subject to change by Sentry Filter and its subsidiaries at any time without notice.

