



### **Sintered Porous Plastics Filter Elements**

We offer Porous Sintered Filter Elements in various shapes and sizes Viz., Discs, Domes, and Hollow Cylinders for filtration of Water, Air and Chemicals. The separation mechanism of Filter Elements is primarily due to deep-bed filtration. The materials of construction are inert polymer alloys to suit the operational conditions like fluid medium, temperature and pressure as well as high chemical resistance. The Filter Elements are available in pore sizes ranging from 1-250 microns. [Nominal Rating]

The material used is a free-sintered material that produces porous plastic products with excellent filtration efficiency of fine solid particulate combined with excellent flow ability of liquids and gases. Controlled particle size distribution and a precise temperature cycle are used to produce a wide range of interconnected cell structures and specific pore size ranges. These pore structures are designed and controlled to function in a variety of applications such as filtering, wicking, diffusing or venting gases, and sound muffling.

The material used is naturally hydrophobic, however, the material can be treated to produce hydrophilic properties allowing wicking of aqueous solutions. In addition, special formulations of FILTRAPORE can act as a self-sealing material in the presence of aqueous solutions.

Porous plastics retain most of the physical properties of their solid counterparts, but also offer a unique set of properties. The unique "tortuous filtration path" of the material produces high filtration efficiency combining the properties of both surface and depth filters. Porous plastics have excellent resiliency; high physical strength and lightweight providing a rugged easily handled part. Filtration efficiencies of 99.8% can be achieved.

### **Advantages**

- Lower Cost
- Inexpensive Tooling
- Repeatable Performance - controlled porosity
- Chemically Resistant - to most acids, bases, solvents and hydrocarbons
- Excellent Corrosion Resistance
- High Purity - FDA/USDA approved resins
- High Strength, Light Weight - friendly to assembly requirements
- Dual Filtration Capabilities - acts as both a surface and depth filter

- Hydrophilic, Hydrophobic, or Self-Sealing Properties

#### **Sintered Porous Plastics Filter Elements**

- Absorbent Wicking
- Aeration
- Applicators
- Battery Frits (Vents)
- Biomedical Filters
- Blood Serum Filters
- Catheter Vents
- Chromatography and SPE Filters
- Lubrication Reservoirs
- Microphone Windscreens
- Pipette Tip Filters
- Pneumatic Mufflers
- Non-Mechanical Self-Sealing Valves and Parts
- Waste & Freshwater Treatment Filter Support Plates
- Water Filtration & Purification CO2 Diffusers and Bubblers
- DNA Sampling Filters
- Flow Control Devices
- Fluidizing Sheet
- Fragrance Release Reservoirs
- Industrial Filters
- Ink Rollers
- Liquid Reservoirs

#### **Sintered Porous Plastics Filter Elements**

##### **Materials**

- Filtering Medium: Inert Polymer Alloys
- Core: Self Supporting
- Gaskets: Available upon request in various materials like silicon, Viton, buna-n.

##### **Removal Ratings**

- 1  $\mu\text{m}$ , 5  $\mu\text{m}$ , 10  $\mu\text{m}$ , 20  $\mu\text{m}$  and custom ratings

##### **Dimensions**

##### **Standard Cartridge**

- Lengths: 10" / 254 mm, 20" / 508 mm, 30" / 762 mm, 40" / 1016 mm

##### **Size 1**

- Out side Diameter: 70 mm
- In Side Diameter: 40 mm

##### **Size 2**

- Out side Diameter: 63 mm
- In Side Diameter: 30 mm

**Effective Surface Area:**

- Standard Cartridge: 0.055 m<sup>2</sup>/10"

**Operating Conditions**

- Maximum temperature: 70°C
- Maximum Forward Pressure: 7 kg/cm<sup>2</sup>
- Maximum differential pressure: 1.1 bar

**Sintered Porous Plastics Filter Elements**

**Sintered Porous Plastics Filter Elements**

Item Code	Size	Length	Micron	Size
POP	ST - Standard	L1 – 10"	M1 – 1 Micron	S1 – Size 1
		L2 – 20"	M2 – 5 Micron	S2 – Size 2
		L3 – 30"	M3 – 10 Micron	
		L4 – 40"	M4 – 20 Micron	
			M5 – 50 Micron	