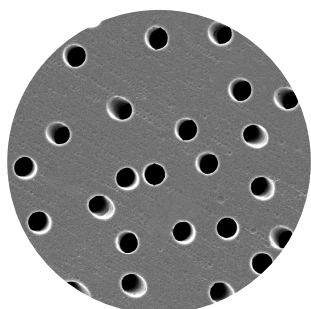


## Polyester Track Etched (PETE) Membrane



GVS PETE Membrane is made from a thin polyester film with a high density of solvent resistance. It is ideal for use in blood assays or general filtration where chemically aggressive solvents may be used. The membrane is produced through a two-step proprietary manufacturing process similar to that of the PCTE membrane. In the first step, polyester film is exposed to ion particles that pass through the film. As the ions pass through the film, they create "tracks" where the polymer is damaged. The beamed film is then exposed to a chemical solution which etches out the tracks creating precise, cylindrical pores. Pore density is controlled by the number of tracks per unit area, and pore size is controlled by varying the temperature, strength and time of exposure to the etching solution. This unique process allows for increased control over pore size and density to ensure the physical properties of each membrane precisely fit

your specifications. The resulting membrane is a thin, translucent polyester film with a smooth, flat surface containing pores of controlled diameter and number. The membrane has better solvent resistance than polycarbonate and captures all particles larger than the precisely controlled pore size on its surface.

### Characteristics

Broad range of chemical compatibility for a wide range of applications

Direct thickness and pore size measurements ensure accurate characteristics

Naturally hydrophilic so pre-treatments and wetting agents are not required

Smooth, thin, glass-like surface for microscopic visualization

Low protein binding ensures clean results

### Typical Applications

- General filtration
- Removal of red blood cells from plasma
- Flow control of reagents through assays
- Precise filtration and prefiltration
- Air analysis
- Filtration of aggressive solutions
- Cellular assays and diagnostics
- Trace element analysis

### Product Characteristics

<b>Sterilization</b>	Gamma Irradiation or Ethylene Oxide (EtO)
<b>USP Class VI Testing</b>	Passed
<b>Thickness</b>	10 - 20 $\mu\text{m}$
<b>Extractables</b>	Low
<b>BSA Protein Binding</b>	< 5 $\mu\text{g}/\text{cm}^2$
<b>Maximum Operating Temperature</b>	284°F (140°C)
<b>Sealing Compatibility</b>	Ultrasonic, Heat, Radio Frequency and Insert Molding
<b>Pore Size Range</b>	0.2 to 10 $\mu\text{m}$

### Nominal Product Characteristics

<b>Water Adsorption</b>	0.24%
<b>(% wt. gain 24-hr immersion)</b>	
<b>Residual Ash Weight Average</b>	0.92 $\mu\text{g}/\text{cm}^2$
<b>Specific Gravity</b>	0.94-0.97
<b>Autoclavable</b>	Yes
<b>Leachables</b>	Negligible
<b>Wetting Characteristics</b>	Naturally Hydrophilic
<b>Burst Strength Minimum</b>	0.7 bar (10 psi)
<b>Migration of Filter Media</b>	0
<b>Optical Properties</b>	Semi-translucent

### Performance Characteristics

Pore Size (a) ( $\mu\text{m}$ )	Pore Density (b) (pores/ $\text{cm}^2$ )	Nominal Thickness (c) ( $\mu\text{m}$ )	Min. Bubble Point (d) (psi)	Typical Flow Rates	
				Water (e) (mL/min/ $\text{cm}^2$ )	Air (L/min/ $\text{cm}^2$ )
10	1 x 10 <sup>5</sup>	9	0.5	1150	34.5 (g)
8	1 x 10 <sup>5</sup>	7	0.7	1000	30 (g)
5	4 x 10 <sup>5</sup>	10	1.2	700	30 (g)
3	2 x 10 <sup>6</sup>	9	2	440	37.5 (g)
2	2 x 10 <sup>6</sup>	10	3	300	16.5 (f)
1	2 x 10 <sup>7</sup>	11	6	130	20 (f)
0.8	3 x 10 <sup>7</sup>	9	7	90	18 (f)
0.6	3 x 10 <sup>7</sup>	9	9	60	7.5 (f)
0.4	1 x 10 <sup>8</sup>	10	12	33	7.5 (f)
0.2	3 x 10 <sup>8</sup>	10	20	10	3 (f)

(a) Tolerance + 0%, -20%

(b) Tolerance + / - 15%

(c) Tolerance + / - 10%

(d) Measured using Isopropanol (IPA)

(e) Initial flow rates using prefiltered water at 10 psid (0.7 kg/ $\text{cm}^2$ )

(f) Initial flow rates using prefiltered air at 10 psid (0.7 kg/ $\text{cm}^2$ )

(g) Initial flow rates using prefiltered air at 5 psi (0.35 kg/ $\text{cm}^2$ )

# Disc and Sheet Membranes

## PETE Membrane - Disks and Sheets

### Ordering information

Dimensions Packaging	13 mm 100/pk	25 mm 100/pk	47 mm 100/pk	90 mm 30/pk	142 mm* 20/pk	293 mm 20/pk	203x254 mm 30/pk
Pore sizes	0.2 µm	1220969	1221383	1215288	1222240	1221385	1220886
	0.4 µm	1221387	1221388	1215373	1220702	1221389	1222242
	0.8 µm		1221398	1215374	1221399	1221401	1222246
	1.0 µm	1215379	1215308	1220871	1221402	1222248	1222249
	2.0 µm		1221404	1221405			1222251
	3.0 µm	1221409	1221410	1215367	1222253	1221411	1221412
	5.0 µm	1215324	1221413	1215183	1221414	1221415	1221416
	8.0 µm	1221417	1221418	1221419	1221420		1222258
	10.0 µm		1220827	1215173	1221424	1221426	1222260

\*Bulk packaging available

## Drain Disc



The polyester spun-bonded “drain” type disc prevents “pore blinding” or blockage of the capillary pores in screen membranes resulting in higher flow rates and increased throughputs. The drain disc increases flow and capture ability by lifting off of screen supports and exposing all the pores. This ensures efficient performance when placed between two filters in a serial filtration stack. The spacers prevent air locking of the downstream screen, or function as filters by binding a percentage of pores in the upstream filter.

The spacer may be sized to fit within the diameter of the O-ring in the filter holder. For example , use a 42 mm spacer under a 47 mm filter.

### Characteristics

- Frequently used with PCTE (Polycarbonate) and PETE (Polyester) membranes to increase flow
- Spacer between stacked membranes

### Ordering information

Product Code	Quantity	Description
1215218	100/pk	Drain Disc, 13 mm
1215141	100/pk	Drain Disc, 25 mm
1238010	100/pk	Drain Disc, 37 mm
1215500	100/pk	Drain Disc, 42 mm
1215163	100/pk	Drain Disc, 47 mm
1221182	25/pk	Drain Disc, 90 mm
1215522	25/pk	Drain Disc, 124 mm
3033452	25/pk	Drain Disc, 142 mm
3007164	25/pk	Drain Disc, 293 mm