ePTFE Membrane
**ePTFE Membrane**

### ePTFE Membrane Specifications

<table>
<thead>
<tr>
<th>Properties</th>
<th>Unit</th>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer</td>
<td></td>
<td>PTFE</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td>MF</td>
<td></td>
</tr>
<tr>
<td>Thickness</td>
<td>μm</td>
<td>20±10</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>mm</td>
<td>≤1450</td>
<td></td>
</tr>
<tr>
<td>Pore size</td>
<td>μm</td>
<td>≤0.20</td>
<td>ASTM-F316-03</td>
</tr>
<tr>
<td>Air flow rate</td>
<td>LPM/10psi</td>
<td>10</td>
<td>ASTM-F316-03</td>
</tr>
<tr>
<td>Hydrostatic pressure</td>
<td>cmH₂O(low range hydrostatic pressure method)</td>
<td>180</td>
<td>KS K ISO 811</td>
</tr>
<tr>
<td>Vapour permeance</td>
<td>g/m²·24hr(water)</td>
<td>7500</td>
<td>KS K 0594</td>
</tr>
<tr>
<td>Air permeability</td>
<td>cm³·cm⁻²·min</td>
<td>20</td>
<td>KS K ISO 9237</td>
</tr>
</tbody>
</table>

**ePTFE(expanded polytetrafluoroethylene)**

Thin porous polymer membrane is made by processing polytetrafluoroethylene. Droplets smaller than the holes in the membrane is greater than the vapor. Therefore, to prevent the water coming from the outside and to pass the vapor occurring from the inside at the same time.

**Advantage**

Chemical resistance, Non-flammable, Weather proof, High electrical property

**Application**

High performance fabric, Implant, Fluorine polymer texture, Gasket, Membrane filter
**ePTFE Membrane**

**Membrane types**
- **MF**
- **UF**
- **NF**
- **RO**

**Membrane types**
- Suspended particles
- Macromolecules
- Salts, Acids
- Monovalent Salts
- Pure Water

**Laminating Technique**
- **Water**
- **Steam**

**ePTFE SEM (x1,000)**

**ePTFE pore size (µm)**

**Flow Rate L/MIN**
- DRY
- WET
- 1/2 DRY

**ePTFE Membrane types and properties**
- ePTFE SEM (x1,000)
- ePTFE pore size (µm)
# ePTFE Membrane

## ePTFE Membrane Specifications

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<td>Polymer</td>
<td></td>
<td>PTFE</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td>UF</td>
<td></td>
</tr>
<tr>
<td>Thickness</td>
<td>µm</td>
<td>40±5</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>mm</td>
<td>≤1450</td>
<td></td>
</tr>
<tr>
<td>Pore size</td>
<td>µm</td>
<td>≤0.10</td>
<td>ASTM-F316–03</td>
</tr>
<tr>
<td>Air flow rate</td>
<td>LPM/10psi</td>
<td>5</td>
<td>ASTM-F316–03</td>
</tr>
<tr>
<td>Hydrostatic pressure</td>
<td>cmH₂O(low range hydrostatic pressure method)</td>
<td>350</td>
<td>KS K ISO 811</td>
</tr>
<tr>
<td>Vapour permeance</td>
<td>g/m²·24hr(water)</td>
<td>2500</td>
<td>KS K 0594</td>
</tr>
<tr>
<td>Air permeability</td>
<td>cm³·atm·min</td>
<td>10</td>
<td>KS K ISO 9237</td>
</tr>
</tbody>
</table>

## High resolution filter

General filtered to separate the liquid or gaseous particles that do not dissolve as well as even the separation of the mixture of gases dissolved in the liquid or dissolved substances is a special membrane. Are characterized by big honor MF and UF membrane on the inner surface of the membrane separation and adsorption simultaneously.
ePTFE Membrane

Removal rate (%)

Utilization

ePTFE SEM (x1,000)

Flow Rate L/MIN

ePTFE pore size (µm)
ePTFE Membrane

• ePTFE Membrane Specifications

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</tr>
</thead>
<tbody>
<tr>
<td>Polymer</td>
<td></td>
<td>PTFE</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td>ULPA</td>
<td></td>
</tr>
<tr>
<td>Thickness</td>
<td>μm</td>
<td>15±5</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>mm</td>
<td>≤1450</td>
<td></td>
</tr>
<tr>
<td>Resistance</td>
<td>mmH₂O</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Remove efficiency</td>
<td>%</td>
<td>99.999</td>
<td></td>
</tr>
<tr>
<td>Hydrostatic pressure</td>
<td>mmH₂O(low range hydrostatic pressure method)</td>
<td>120</td>
<td>KS K ISO 811</td>
</tr>
</tbody>
</table>

• Air Filter Membrane

ULPA grade has a low pressure drop and high dust collection efficiency. Due to these excellent properties compared with glass fiber filter.
Not involve Boron and Phosphorus as chemicals, as well as impurities.
Also excellent chemical resistance and moisture resistance.
Excellent dust emission feature can easily exhausted to the outside.
Air Filter

- **Advantage**
  Low pressure loss and high dust collection efficiency, Excellent chemical resistance,
  Excellent moisture resistance, Excellent dust release properties.

- **Application**
  vacuum, car, air conditioner, semiconductor

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**Characteristics of the air filter**

- **Tiny dust removal**

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**Air Filter membrane**

**ePTFE SEM (x1,000)**

**Water filter pore size**

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**Flow Rate L/MIN**

- **DRY**
- **1/2 DRY**
- **WET**

---

**FLONTEC**
### Laminating Textile

- **Textile Specifications**

<table>
<thead>
<tr>
<th>Properties</th>
<th>Unit</th>
<th>Value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td></td>
<td>Laminated fabric membrane</td>
<td></td>
</tr>
<tr>
<td>Thickness</td>
<td>㎛</td>
<td>270±20</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>mm</td>
<td>≤1450</td>
<td></td>
</tr>
<tr>
<td>Pore size</td>
<td>㎛</td>
<td>≤0.25</td>
<td>ASTM-F316-03</td>
</tr>
<tr>
<td>Air flow rate</td>
<td>LPM/10psi</td>
<td>10</td>
<td>ASTM-F316-03</td>
</tr>
<tr>
<td>Hydrostatic pressure</td>
<td>cmH2O(low range hydrostatic pressure method)</td>
<td>≤1550</td>
<td>KS K ISO 811</td>
</tr>
<tr>
<td>Vapour permeance</td>
<td>g/m²·24hr(water)</td>
<td>3200</td>
<td>KS K 0594</td>
</tr>
<tr>
<td>Air permeability</td>
<td>㎤,㎠,min</td>
<td>15</td>
<td>KS K ISO 9237</td>
</tr>
<tr>
<td>Color fastness to washing</td>
<td>30℃</td>
<td>change in color 4</td>
<td>Cotton 4–5, Nylon 4–5, Polyester 4–5, Acrylic 4–5</td>
</tr>
<tr>
<td>Color Fastness To Drycleaning</td>
<td>change in color 4</td>
<td>solution 4</td>
<td>KS K ISO 105 D01</td>
</tr>
<tr>
<td>Color fastness to rubbing</td>
<td>Dry 4–5</td>
<td>Wet 4–5</td>
<td>KS K 0650</td>
</tr>
<tr>
<td>Bonding stress</td>
<td>cN/3cm</td>
<td>MD 45</td>
<td>TD 30</td>
</tr>
</tbody>
</table>

**Laminating Textile**

FLONTEC’s Highly breathable laminated products supply more convenience also excellent waterproof and windproof function to maintain comfort.
Laminating Textile

- **Advantage**
  Excellent Porous Waterproof, Excellent Vapor permeance, High Hydrostatic pressure

- **Application**
  Mountain, Ski, Cycle, Golf apparel etc
Measurement Equipment

- Scanning Electron Microscope
- Tensile Strength Tester
- Hydrostatic Pressure Tester
- Permporometer
Information

Seoul Office
Cheonan Head office & Factory
Production of Teflon cable
Production of ePTFE membrane

- ePTFE membrane
- filtration
- Textile
- ULPA
- Air filter
- Water filter
- Lamination

History

2003.10 Established Flontec co.ltd
2004.05 Production of PTFE coaxial cable
2004.10 ISO 9001 Certification
2004.11 ISO 14001 Certification
2011.04 Head office was moved and extended in Dokjung-Ri Plant
2011.08 Developing Expanded ePTFE membrane
ePTFE Membrane

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