

## Flat sheet membrane

## MicroPES 1FM flat sheet membrane

**Model:** 1FM**Product type:** Flat sheet filtration membrane

**Description:** The Thermo Scientific™ MicroPES™ 1FM Flat Sheet Membrane is made from a partially sulfonated polyethersulfone polymer. Their asymmetric pore structure offers a perfect balance between highly selective filtration characteristics and high fluxes with minimized flux barriers. In order to enhance the mechanical stability, the membrane has a nonwoven backing.

**Available make-up configurations:** Rolls

## Performance

| Parameter                                                                                                | Value                                                                                                               |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Bubble point (IPA)                                                                                       | ≥ 2.0 bar (≥ 29.0 psi)                                                                                              |
| Transmembrane flow (water, 25°C)                                                                         | ≥ 7 ml/(min cm <sup>2</sup> bar)<br>(≥ 448 ml / (min ft <sup>2</sup> psi))<br>(≥ 3.11 ml/(min in <sup>2</sup> psi)) |
| Bacteria retention in accordance with the current ASTM F838 guidelines ( <i>Brevundimonas diminuta</i> ) | 0 CFU at a challenge level of not less than 10 <sup>7</sup> CFU/cm <sup>2</sup>                                     |

## Materials of construction

| Parameter        | Value            |
|------------------|------------------|
| Membrane         | Polyethersulfone |
| Nonwoven         | Polyolefine      |
| Adhesive         | Polyolefine      |
| Wetting property | Hydrophilic      |

## Physical properties

| Parameter           | Value                                |
|---------------------|--------------------------------------|
| Thickness           | 265 µm ± 50 µm<br>(10.4 mil ± 2 mil) |
| Tensile strength    |                                      |
| Longitudinal        | ≥ 3000 cN / 15 mm                    |
| Transversal         | ≥ 2500 cN / 15 mm                    |
| Elongation at break |                                      |
| Longitudinal        | ≥ 15%                                |
| Transversal         | ≥ 15%                                |

All data is based on internal Thermo Fisher Scientific testing procedures.

**Flushing recommendation:**

This product is known to contain residual manufacturing solvents. The customer is responsible for determining and implementing the appropriate transmembrane washing conditions to remove these residuals based on their assessment, requirements, and particular application needs.

**Intended Use:** The MicroPES 1FM flat sheet membrane are flat sheet liquid microfiltration membrane products intended for use by customers, such as OEMs, in the manufacture of liquid microfiltration cartridges and liquid microfiltration systems in various applications such as industrial, food and beverage, pharmaceutical and medical device, etc. requiring specialized liquid microfiltration in accordance with the product's use requirements and instructions.

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