

PTFE Micro-Expanded Membrane Properties

Porex PM21M is used when a high flow rate of gas (up to 13 mL/min/cm²) through the membrane while prohibiting liquid water penetration. This is useful in applications such as Flow Batteries, Vents, etc where it is desirable to keep liquid on one side of a barrier while still allowing gas flow in or out of the liquid.

PM21M can be used in electronic housings to protect delicate components from rough use and environmental conditions. The membrane allows pressure equalization due to temperature changes and minimizes condensation while keeping dust, dirt, and liquid moisture out. PM21M microporous polytetrafluoroethylene (PTFE) membrane is UL 94 V-0 (0.1mm) and 5VA (0.75mm) flame rated, UL 746C listed, has IP ratings between IP 64-68, and can be tested to meet NEMA or other standards.

Key Benefits:

- No membrane support backing required
- Chemically inert
- Thermal resistant (500°F / 260°C continuous use)
- High tensile strength
- Omni-directional flow
- Resistance to thermal cycling fatigue



Common Applications

- Battery Vents
- Gas/Liquid Barriers
- Gas Sensor Vents
- IV Catheter Vents
- Automotive Vents

| Property | Unit | PM21M |
|--------------------------|------------------------|------------|
| Thickness | μ | 130 |
| IP Rating *** | - | 64, 67, 68 |
| UL-94 | - | V-0 |
| UL 746C * | - | f2 |
| Filtration >99.99% | μ | 0.5 |
| Water Intrusion Pressure | mb | 350 |
| Max Temperature | °C | 260 |
| Airflow | ml/min/cm ² | 1500 |
| Salt Fog | - | No pen. |

*f1 rating if no water immersion - contact UL

***IP 68 is a user defined test, must be evaluated

