

PTFE Membranes for Venting Applications



PTFE membranes are hydrophobic in nature and are effective barriers to microbes and particulate matter. The high titer reduction and water intrusion pressures allow the membranes to repel high surface tension liquids while venting gases. PTFE membranes are used in a variety of healthcare applications such as vents on IV filters and spike vents, protecting equipment and sensors from fluids and contamination. Material characteristics include broad chemical compatibility, excellent particle retention, easy handling and sealing, and compatibility with various sterilizing methods, making it a versatile material for applications which require a hydrophobic barrier. Whether you need to keep fluid confined while letting air or gas pass, or a sterile barrier, PTFE is the ideal membrane.

Excellent lot-to-lot consistency ensures product performance meets critical application requirements. Our PTFE membrane has one of the best ratios of airflow to particle retention available on the market. The membrane is available laminated to a non-woven polyester support material, giving the membrane excellent handling and machining characteristics. The support material available also imparts broad sealing capabilities to the membrane allowing easy assembly into devices. Additionally, the wide chemical and temperature compatibility and compliance with United States Pharmacopeia (USP) Biological Reactivity Tests, *In Vivo* <88> for biosafety ensures robust performance in critical venting applications.

Applications

- Venting
- Equipment protection
- Hydrophobic barrier
- Organic solvent filtration

Sealing

- Mechanical
- Adhesive
- RF welding
- Ultrasonic
- Insert molding

Product Information

Specification

Typical Membrane Characteristics

Base Material	Support Material	Pore Size (µm)	Average Thickness	
			mils	µm
Supported polytetrafluoroethylene (PTFE) (Emflon)	Non-woven polyester (LHOP)	0.02	5.5-11.0	139.7-279.4
	Non-woven polyester (LHOP)	0.2	8.0-13.0	203.2-330.2
	Non-woven polyester (LHOP)	0.45	7.8-10.6	198.1-269.2
	Non-woven polyester (LHOP)	1.0	7.0-11.0	177.8-279.4

Typical Performance Characteristics

IPA Bubble Point (psi)	Average Mullen Water Breakthrough (psi)	Average Gurley Airflow (sec/100cc/20 oz/1.0 in²)
N/A	≥ 230.0	</= 75.0
≥ 16.0	≥ 80.0	</= 23.0
≥ 6.1	≥ 30.0	</= 17.0
≤ 19.3	≥ 20.0	</= 11.1

Ordering Information

Custom roll, sheet, and disc sizes available upon request.

Please contact your local sales representative for additional information.

Supported PTFE

Part Number	Description	Pkg
PTF002LHOP-SAMP	Emflon PTFE membrane, 0.02 µm, 8" x 10" sheet	1/pkg
PTF020LHOP-SAMP	Emflon PTFE membrane, 0.2 µm, 8" x 10" sheet	1/pkg
PTF045LHOP-SAMP	Emflon PTFE membrane, 0.45 µm, 8" x 10" sheet	1/pkg
PTF100LHOP-SAMP	Emflon PTFE membrane, 1.0 µm, 8" x 10" sheet	1/pkg



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