MEMBRANE LAMINATES AND DIE CUTS FOR MEDICAL APPLICATIONS

MICROFILTRATION AND VENTING SOLUTIONS

Protective membranes from aspire are made with proprietary ePTFE for a variety of applications across the medical industry. For decades. medical device manufacturers have relied on aspire membranes to filter, vent and protect a wide range of sensitive equipment and medical devices. The combination of consistent airflow, excellent retention and chemical resistance properties are the cornerstone of aspire products.

The aspire product line includes a full range of microfiltration and venting products in a variety of formats. With decades of engineering and manufacturing experience, our innovative team works closely with customers to solve their most critical filtration challenges.

PARKER PERFORMANCE MATERIALS—FIND OUT MORE ABOUT ASPIRE SOLUTIONS

MEDICAL APPLICATIONS

Microfiltration media from aspire protects equipment from contamination during use. With its microporous structure, the protective membrane allows gas to pass through with a low pressure drop while providing a liquid and particulate barrier. Choosing the correct pore size causes bacteria and virus removal from the airstream and, in the case of a suction collection canister, the hydrophobic nature of the filter can act as a safety shut off valve to stop liquids contaminating the vacuum line.

FULL-SERVICE SOLUTION SET:

- **Innovative filters utilizing proprietary media and treatments**
- **Well-equipped laboratory and test facilities**
- **Experienced sales and application engineers to solve your filtration challenges**
- **Scalable solutions from laboratory to production**
- **Thermal lamination**
- **Die cutting**

TYPICAL MICROFILTRATION APPLICATIONS:

- **Vacuum pump protection filters**
- **Sensor protection**
- **Suction collection canisters**
- **Insufflation filters**
- **Smoke filters**
- **Medical pumps**

SUGGESTED GRADES

Relative Air Permeability	Product Name	Nominal Pore Size (µm)	Air Permeability (ft3/min/ft2@125 Pa) (ASTM D737)	Air Permeability* (ml/min/cm2@125 Pa) (ASTM D737)	Wet Mullen Burst (psi) (ASTM D751)	Oil Repellency Grade (membrane side) (AATCC118)	USP Class VI Status
High Flow	QL207	5.0	3.0 - 5.5	91 - 168	≥ 2	NA	As Needed
High Flow	QL209	1.0	0.6-1.2	18 -37	≥ 21	NA	As Needed
High Flow	QP981T	3.0	1.5 - 5	46 - 152	≥ 15	Oil #7	As Needed
Medium Flow	QP910	0.45	0.20 - 0.45	6 - 14	≥ 20	Oil #6	As Needed
Medium Flow	QL211	0.45	0.6-1.2	18 -36	≥ 21	NA	As Needed
Medium Flow	QL210	1.0	0.2 – 0.6	6 - 18	≥ 14.5	Oil #6	As Needed
Medium Flow	QL827	0.45	0.30 - 0.70	9 -21	≥ 14.5	Oil #6	As Needed
Low Flow	QL217	0.2	0.07 -0.25	2 - 8	≥ 35	NA	As Needed
Low Flow	QP952	0.2	0.15 – 0.35	4.5 - 11	≥ 35	NA	As Needed
Low Flow	QP944U	0.2	0.11 – 0.50	3 - 15	≥ 34	Oil #6	As Needed
Low Flow	QP917	0.2	0.037 – 0.25	1.1 – 7.6	≥ 45	NA	Certified

*All metric conversions are approximate
Parker Performance Materials has laminates specifically engineered to meet many regulatory requirements including RoHS, EU Reach, EU POPs, FDA / EU Food Contact, USP Class VI, and others by request.

VENTING

The aspire product line includes a variety of venting products designed for the most challenging applications. To ensure the performance of medical equipment and devices, vents made from aspire provide critical protection against liquids and particulates while allowing air and gas to pass through the membrane.

Designed for high levels of gas permeability, aspire vents provide rapid pressure equalization and high airflow. The hydrophobic ePTFE vents can be treated with a proprietary oleophobic coating to provide added protection against liquids and oils. The vents can be combined with a charcoal adsorbent for use in ostomy and urology bags to permit easy inflation of the device while safely retaining contents and odors.

TYPICAL VENTING APPLICATIONS:

- **Medical device vents**
- **IV administration set vents**
- **Spike vents**
- **Ostomy & Urology bags**
- **Microfluidic device & diagnostic vents**
- **Battery vents**
- **Lyophilization / Freeze Drying vents**

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DESIGN CONSIDERATION

ePTFE is a versatile, naturally inert, hydrophobic, and biostable substance, which consistently proves to be a valuable component when designing safe and dependable medical filtration devices. Through careful adjustment of its physical properties during manufacturing, ePTFE can be manipulated to provide the desired balance of air and gas permeability with the retention of potentially hazardous aerosols, particle, and liquids. With the ability to laminate ePTFE to different supports and functional layers, it can be easily incorporated into a broad range of medical equipment and devices. Oleophobic treatment of ePTFE extends the membrane's adaptability across an even wider assortment of fluids and application requirements.