FULLCIRCLE BIOMEDICAL

Expanded PTFE Membrane

Expanded PTFE membranes engineered for implantable and interventional devices

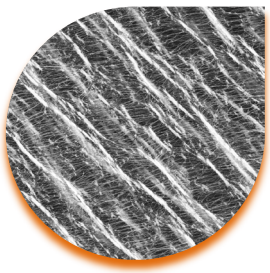
Move from concept to production in weeks, not months. Full Circle Biomedical provides application-engineered ePTFE membranes, slit tape, and flat sheets for demanding implantable devices.

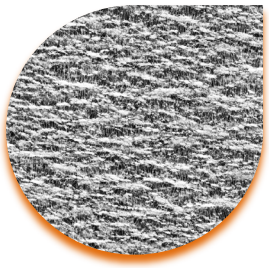
6 Proven Membranes. 10x Pore Range. Ready for Prototyping

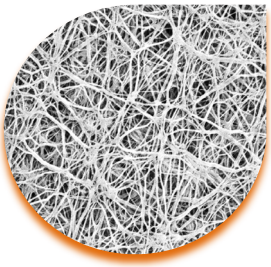
Detailed below, our reference portfolio eliminates guesswork in early material selection. Each membrane is currently produced and characterized (TDS, SEM, mechanical data). Use these as your starting point to evaluate performance in your application, then customize or scale with proven baseline data—cutting weeks off your development timeline.

ID	Sintering	Density (g/cc)	Thickness (um)	Mean pore (um)	IND (um)	Permeability*
S2616	Partial	0.8	7	0.19	1.7	🟠
HS160	Sintered	0.25	28	0.28	2.0	🟠
321	Unsintered	0.3	34	0.34	4.4	🟡
2300	Unsintered	0.9	5	0.65	11	🟡
200	Unsintered	0.6	10	1.56	17	🟢
300	Unsintered	0.4	11	1.24	21	🟢

* Relative permeability | IND = internodal distance via SEM – n=>125







Why Full Circle Biomedical?

✓ **Reference Portfolio in stock**
Accelerate feasibility assessment within days.

✓ **De-Risk Material Selection**
6 proven constructions reduce guesswork.

✓ **Proven in Market**
Full traceability from prototype through production.

✓ **Engineering Partnership Model**
25+ years of applied ePTFE and medical textile expertise.

✓ **Scale Without Limits**
From single-unit prototypes to 7-figure annual volumes.

Request TDS & Engineering Review

- Identify membrane(s) for TDS + SEM review
- Discuss custom structures and trial builds
- Review wrapping, and sintering approaches
- Brief technical introduction (NDA available)

Bruce Anneaux, PhD
✉ bruce@fullcirclebiomedical.com
☎ 803-440-2564

25+ years of applied ePTFE and medical textile engineering.

We operate as an extension of your engineering team, not a vendor.

What we help you define:

- Membrane construction (portfolio or custom)
- Workflow and handling best practices
- Integration architecture
- Consolidation and sintering parameters
- Supply strategy and scale-up timeline

What we support:

- Frame covering, mandrel wraps, composite lay-up
- Lamination and bonding to metals and polymers
- Custom membrane development and production
- Device specific consolidation and sintering profiles
- Documentation and traceability

Result: Faster path from reference portfolio selection to your optimized design, with complete material documentation.

Applications

Cardiovascular & Vascular
Stent/graft coverings
Valve components
Vascular conduits
Cardiac patches

Structural Heart & Occlusion
Septal/LAA occluder
Valve sealing skirts

Soft Tissue & Reconstruction
Hernia mesh
Chest wall reconstruction

Neurosurgical
Dural substitutes
Adhesion prevention

Device Components
GI sleeves and luminal barriers
Composite tubing and pinch valves
Micro-coax cable dielectrics
Vents and filters

Core Properties (All Membranes):

- Proven biocompatibility
- Microporous structure enabling controlled permeability
- Hydrophobic (naturally water-repellent)
- Chemically inert (stable in biological environment)
- Compliant and tough (suitable for suturing and handling)
- Low dielectric constant (suitable for cable applications)

Design Advantages:

- Tunable pore size and IND
- Processable via wrapping, winding, lamination, bonding
- Compatible with heat and pressure consolidation
- Suitable for multi-layer structures and composites

Available Forms – Master rolls up to 72" wide, slit tape, sheets, reinforced laminates, composite structures

We supply membrane and engineering insight; customers design and manufacture the finished device.

Full Circle Biomedical
Bruce Anneaux, PhD - bruce@fullcirclebiomedical.com