SUPERIOR NYLON ADVANTAGES

Breakthrough For Liquid Filtration

Superior Nylon is a multi-layer gradient-density hydrophilic membrane composite, delivering higher flux at lower pressure drop for high purity liquid micro-filtration.

- ✓Provides reliable membrane performance
- ✓Delivers high retention efficiency
- ✓Long service life at low pressure drop
- ✓Highly consistent performance
- ✓Energy efficient
- ✓Complies with US FDA (21CFR), USP Class VI, NSF /ANSI 61, EU Plastics Directive 10/2011
- ✓Easy to process and convert
- ✓Overall best in class sub-micron liquid filtration media

SUPERIOR
Felt & Filtration

BEST IN CLASS

SUPERIOR NYLON MEMBRANE

SUBMICRON LIQUID FILTRATION MEDIA

SUPERIOR NYLON MARKETS

SUPERIOR Nylon Membrane Media
For cleaner, safer, and healthier living

Water Filtration

SUPERIOR Nylon delivers membrane reliability with superior flow rate, making it a preferred solution for water filtration

Food & Beverage

SUPERIOR Nylon high flux rate meets every demand for innovative food and beverage products

Industrial

Naturally hydrophilic with wide chemical compatibility, and good resistance to organic solvents makes SUPERIOR Nylon an attractive choice for many industrial applications

Bioprocessing

SUPERIOR Nylon consistent membrane performance, combined with high flux rate makes it a trusted choice to meet complex challenges in bioprocessing

SUPERIOR NYLON MARKETS & APPLICATIONS

SUPERIOR Nylon Membrane is a best-in-class media, delivering higher flux and lower pressure drop for high purity liquid microfiltration

SUPERIOR NYLON ULTIMATE SOLUTION FOR HIGH PURITY LIQUID MICROFILTRATION NEEDS

WATER FILTRATION

- Municipal water, wastewater, potable drinking water
- Trupor Benefits: High productivity, long life, energy saving
- Grades: Nylon (0.2-1.2 micron)

FOOD & BEVERAGE

- Beer & wine, juice, soda
- Trupor Benefits: high throughput. efficient particle retention
- Grades: Nylon (0.2-0.8 micron)

INDUSTRIAL

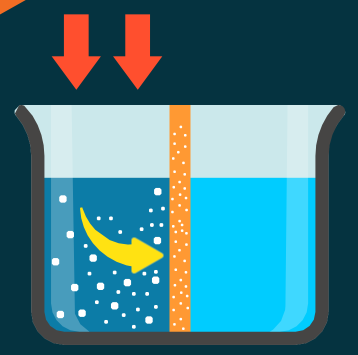
- Solvent filtration, chemical processing, oil & gas
- Trupor Benefits: High throughput, fewer changeouts
- Grades: Nylon (0.2-5.0 micron)

BIOPROCESSING

- Buffer water, IV filters, monoclonal antibodies, vaccines
- Trupor Benefits: Improved yield, reduced production cost
- Grades: Nylon (0.2-0.45 micron)

FLUX MATTERS

SUPERIOR NYLON Better Flux Matters



Water Filtration High

- productivity
- Energy saving
- Long life

SUPERIOR NYLON Better Flux Matters

Industrial

- High throughput
- Fewer change outs
- Reduced downtime

What is Flux Rate?

Flux rate is defined as the daily or hourly fluid flow through a membrane's surface area

Flux and Flow Rate

https://www.youtube.com/watch?v=ufOvAkPGLQE

SUPERIOR NYLON Better Flux Matters

Food & Beverage

- Better product consistency
- Lower cost of production
- Overall filtration cost saving

SUPERIOR NYLON Better Flux Matters

Bioprocessing

- Improved product yield
- Reduced production cost
- Less energy consumption

https://www.superiorfelt.com/products/air-and-liquid-filtration-media/micron-filters/

SUPERIOR NYLON

FAQ

Superior Nylon membrane media, best in class, delivering higher flux at lower pressure, for high purity liquid microfiltration

Superior Nylon membrane chemical compatibility

Superior Nylon is compatible with aggressive solutions such as alcohols, DMSO, and high-PH solutions. Avoid use with acids and protein recovery applications.

What makes Superior Nylon different from commercial grade membranes?

Its unique innovative gradient structure, high void volume, and superior pore size uniformity outperform commercial grade membranes for high throughput and reduced total filtration cost.

What micron grades of Superior Nylon are commercially available?

Superior nylon membrane is available in 0.20 μm, 0.45 μm, 0.65 μm, 0.80 μm, 1.2 μm and 5.0 μm in rolls, coils, sheets and custom fabricated parts.

Is Superior Nylon membrane pleatable?

Superior nylon membrane can be laminated with, or co-pleated, with supporting layers for production of pleated filter cartridges.

SUPERIOR NYLON DATASHEET

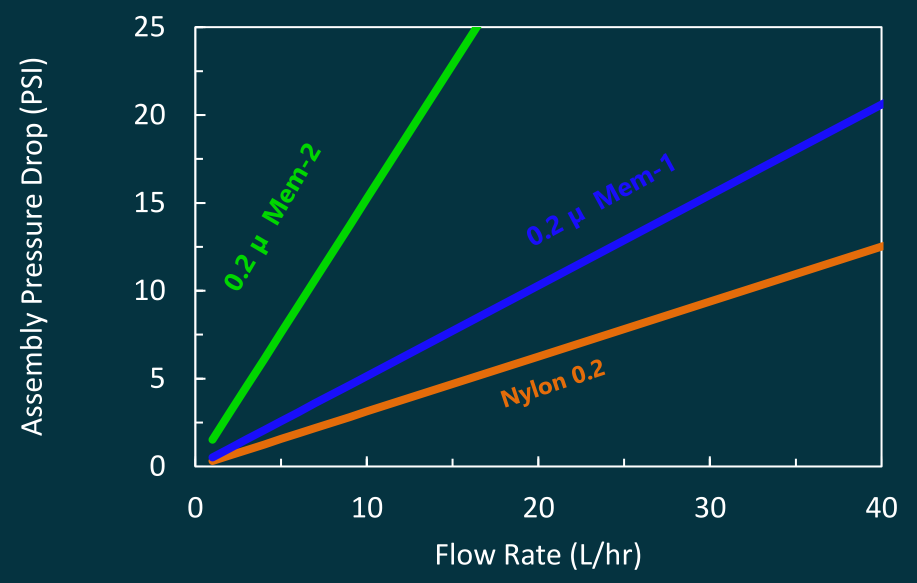
Product Code	Micron Rating	Polymer	Total Basis Weight (gsm)	Thickness (mm)	Air Perm (cfm)	Tensile MD (Lbs/in)	Mean Flow Pore (µm)	Water Permeability (LMH/psi)	Dirt Holding Capacity (g/m^2) 2)	Biocompatibility (ISO 10993-5)	Nylon Micron Range
Test Method			ASTM D 3776	ASTM D 1777	ASTM D 737 @ 125 Pa	ASTM D 5035	ASTM F316		Test Dust ISO A1	Pass	Market
TPPA-0.20-V2	0.20	Nylon	75	0.20	N/A 1)	4.2	0.22	2500	130	Pass	
TPPA-0.45-V2	0.45	Nylon	75	0.20	1.8	4.2	0.30	3000	135	Pass	
TPPA-0.65-V2	0.65	Nylon	75	0.20	3.8	4.2	0.43	4500	145	Pass	
TPPA-0.80-V2	0.80	Nylon	75	0.20	4.0	4.2	0.65	5000	150	Pass	
TPPA-1.20-V2	1.20	Nylon	75	0.20	6.0	4.2	0.66	5500	160	Pass	
TPPA-5.00-V2	5.00	Nylon	75	0.20	7.0	4.2	0.80	6500	160	Pass	

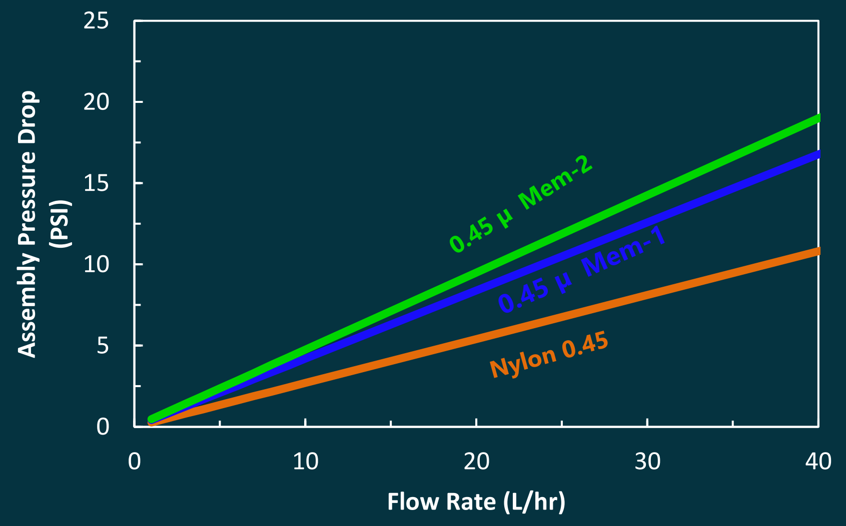
Industrial
Water
Food & Beverage
Biopharma

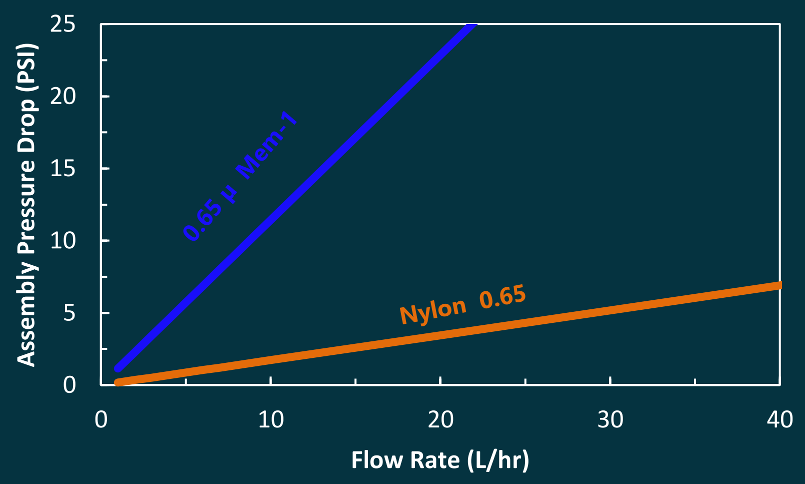
1. 18 cfm @ 2500 Pa
2. Typical DHC for 0.45µ ~ 110-170 g/m2 for A1 test dust

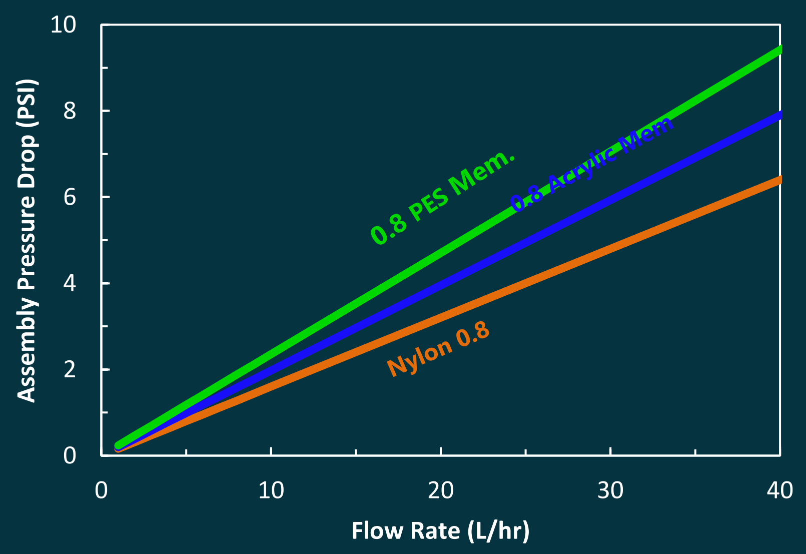
SUPERIOR NYLON
BENCHMARK STUDY

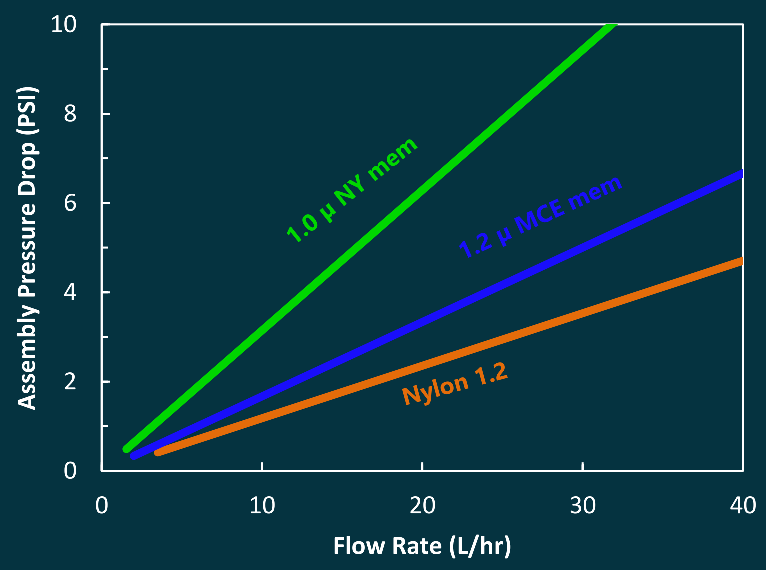
PRESSURE DROP VS FLOW RATE

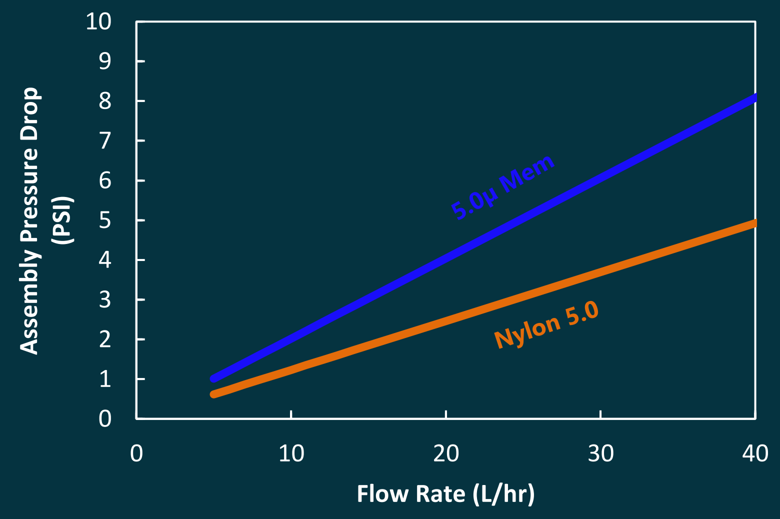








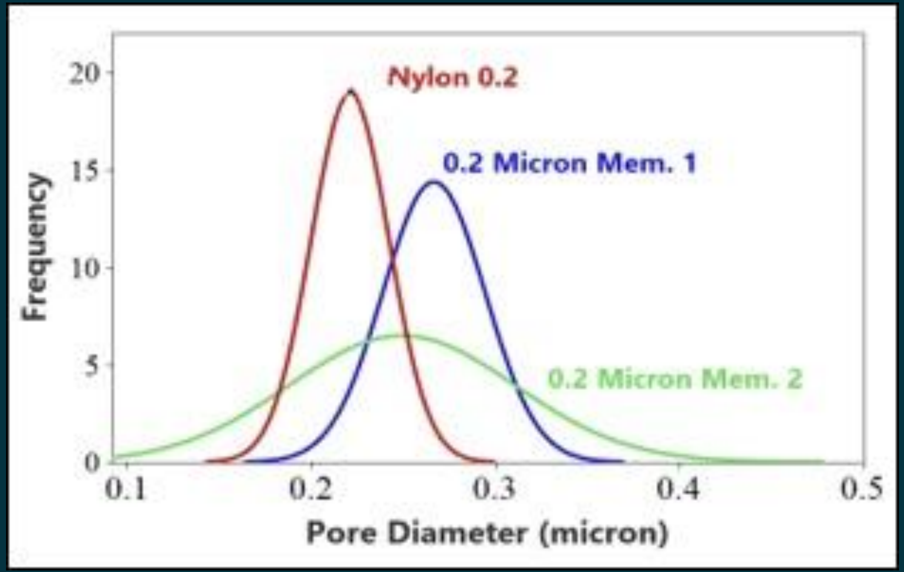


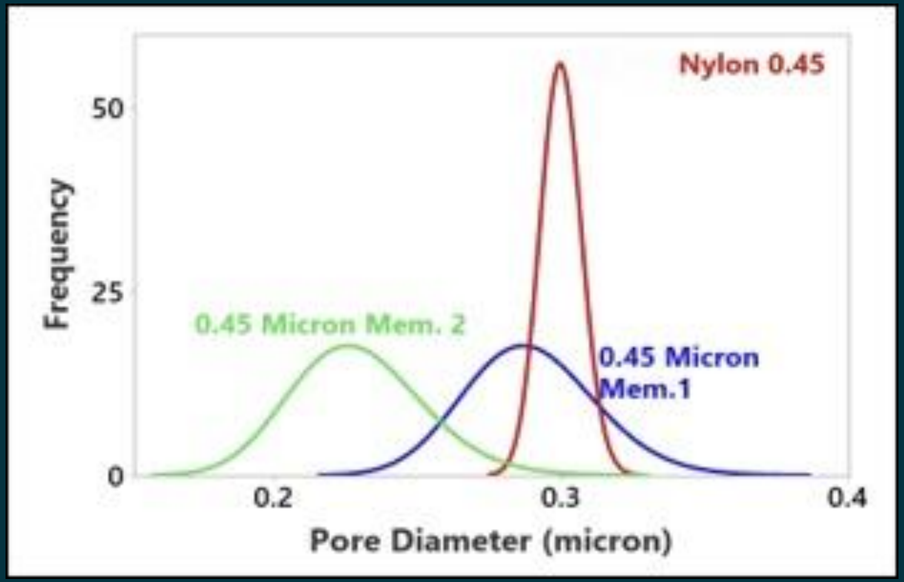


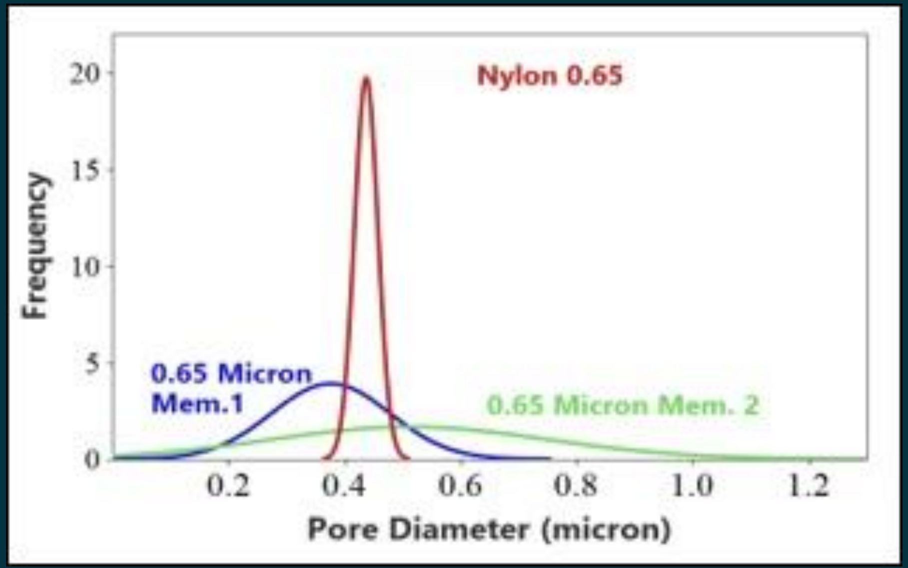
HIGH FLOW RATE AT LOWER PRESSURE

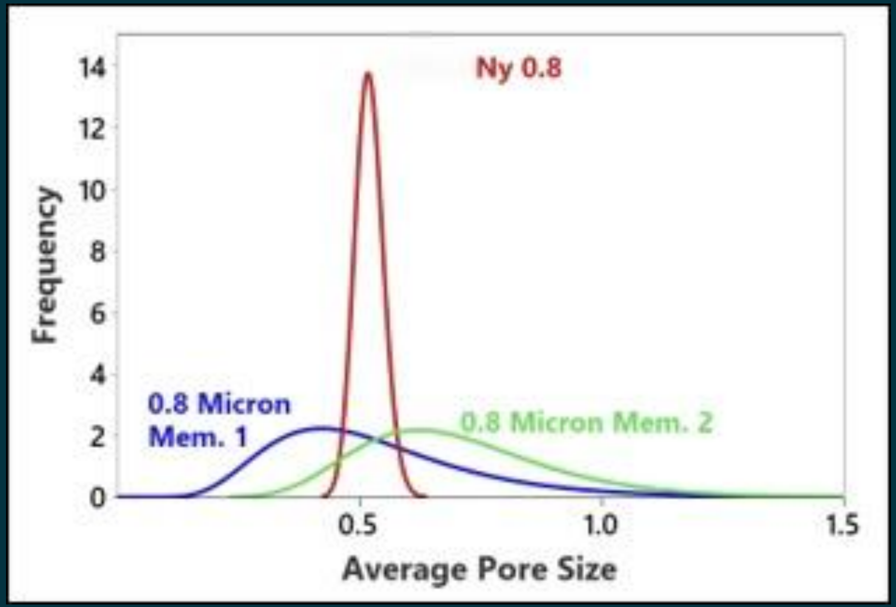
Nylon composite design has superior flux rate and lower pressure drop versus current commercial membranes.

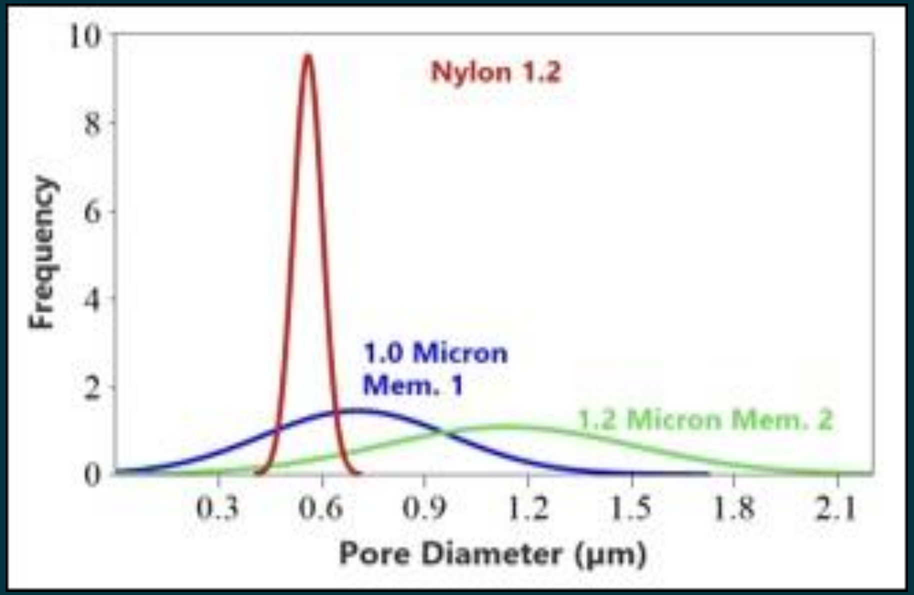
SUPERIOR NYLON
BENCHMARK STUDY
PORE SIZE DISTRIBUTION

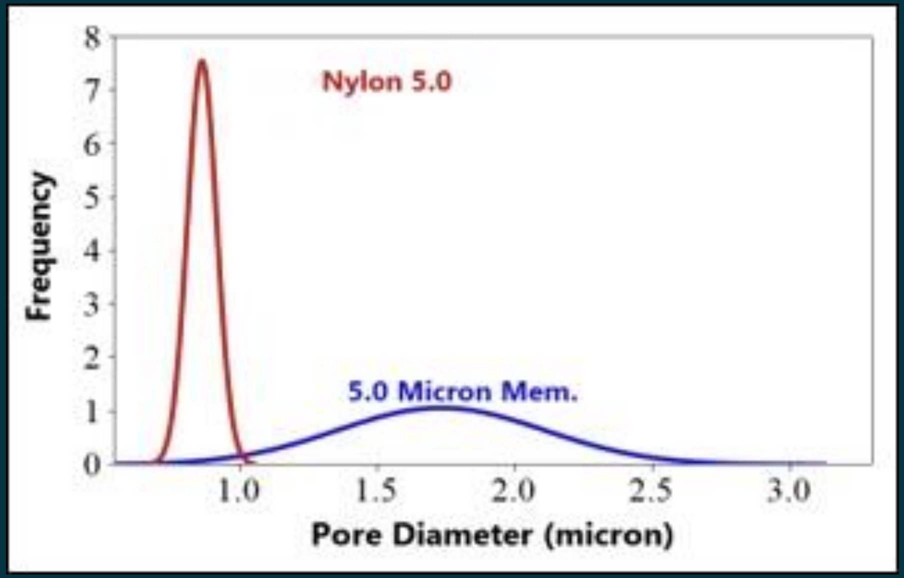












SUPERIOR PORE SIZE UNIFORMITY

Superior Nylon gradient structure demonstrates exceptional pore size uniformity in comparison to commercial grade membranes,

WATER FILTRATION CASE STUDY

POUR THROUGH APPLICATION

SUPERIOR NYLON

	Product B	Product P	Nylon 0.45
Permeability (ml/min/cm²/psi)	5.7 ml/min/cm²/psi	4 ml/min/cm²/psi	13 ml/min/cm²/psi
Hematite 0-5 micron NTU < 0.5	Failed	Passed	Passed
3.0 micron Polystyrene microsphere NTU < 0.5	Failed	Passed	Passed

NYLON SUPERIOR FLUX

Nylon superior flux delivers high throughput and efficient particle retention versus current commercial membranes.

THANK YOU

We look forward to working with you to **create safer, cleaner and healthier living** for better tomorrow!

Contact Us

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www.superiorfelt.com
https://www.superiorfelt.com/products/air-and-liquid-filtration-media/micron-filters/

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