PPG Filtration Technologies

New highly efficient membrane filter outperforms conventional crossflow membrane technologies

Exceptional Flux

- Uses a unique composite single-layer microstructure membrane for spiral wound filters
- Flux rate 2 to 4 times higher than conventionally cast polymeric membranes
- Lower fouling with improved cleanability
- Targeted for ultra and micro filtration applications

Exceptional Separation

- Separates virtually all undissolved constituents due to its precise pore size distribution across the ultra and micro filtration spectrums
- Capable of consistently separating down to <10 ppm levels: free oil, emulsified materials (e.g., oil, soap and surfactant-laced fluids) and total suspended solids (e.g., bacteria and other particulates)
- Able to handle system upsets of high oil content

Exceptional Durability

- Operates at maximum temperatures from 135 - 155 °F
- pH levels from 1.8 to 10
- Exceptional oil and chemical resistance
- Capability to backwash

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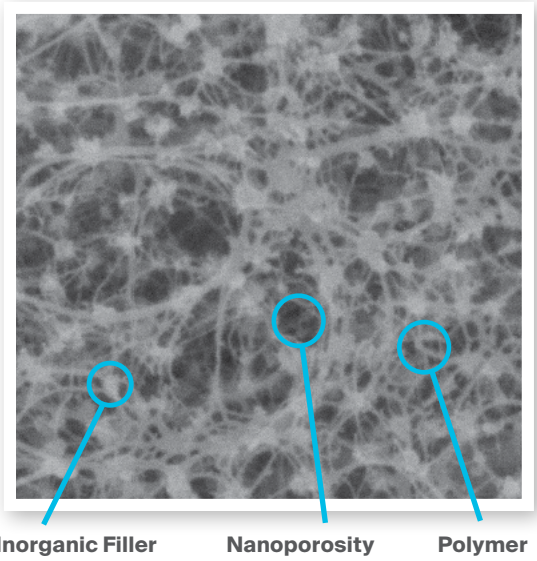
Innovative Material Science Drives Superior Performance

The superior performance of the PPG membrane is driven by advancements in material science made by PPG's team of scientists and engineers. The proprietary manufacturing process allows a precise pore size which can be varied over the ultra and micro filtration ranges with a narrower pore size distribution compared to conventionally cast membranes.

A composite membrane is formed by combining a nanoporous, hydrophilic inorganic filler and a hydrophobic polymer. The hydrophilic nature of the high surface area inorganic filler creates strong capillary forces, pulling water through the membrane. The nanoporous structure reduces fouling by not allowing penetration of oil droplets or solid particles. This innovative morphology results in higher flux rates and more efficient oil/water separation and suspended-solids removal than conventionally cast hydrophilic and oleophilic membranes.

Magnification of the PPG membrane (x10000)



Wide Operational Envelope

Property		Filter Limits
Single-Filter Flux Rate	Oil/Water Mixture	15 - 25 GFD
	Water	50 - 80 GFD
Maximum Temperature*		135 - 155 °F
Maximum Pressure		70 psi
Maximum Transmembrane Pressure		35 psi
pH Range		1.8 - 10

This table serves only as a guide. Factors such as temperature, pH concentration, exposure time and system differential pressure can have a material effect on these recommendations. Testing in accordance with the end user's safety guidelines is recommended. Due to the multitude of factors affecting chemical compatibility, the user is responsible for making final selection of products and materials for an application. *Flux rates are reduced at low operating temperatures.

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