



Porifera PFO MEMBRANE

HIGH REJECTION, HIGH FLUX FORWARD OSMOSIS MEMBRANES



Membrane Performance*

Water Permeation	FO Mode: 33 ± 2 LMH PRO Mode: 55 ± 3 LMH
Reverse Salt Flux (RSF)	FO/PRO Mode: 0.50 ± 0.2 g/L
Membrane Parameters	Structural parameter (S value): 215 ± 30 microns

* Test conditions:

Flat sheet membrane in a FO cross flow cell
Feed: 0.233 LPM (0.061 GPM) pure water at 25 oC (77 °F).
Draw: 1.0 M NaCl water at 25 oC (77 °F).

Operating Limits and Guidelines

Membrane Storage	Dry membrane: Store membrane in sealed packaging. Minimize light exposure. Wet membrane: Once wet, store the membrane in dechlorinated water. Do not allow the membrane to freeze or dry. For storage exceeding 1 week, store in 1 % sodium bisulfite solution.
Maximum Trans-Membrane Pressure (TMP)	180 psi
pH Operating Range	2 - 11
Maximum Chlorine	< 0.1 ppm

FREQUENTLY ASKED QUESTIONS

01

What's the difference between the two sides of the membrane?

The matt side is the "skin" side. Your membrane sample will have the word "Skin" written in pencil on one of the corners to help you identify the skin side.

The shiny or opalescent side is the "back" side or "support layer" of the membrane.

02

How do I store the dry membrane?

Do not expose the membrane to direct light, excess heat or cold. Do not store the membrane against paper-like or absorbent materials as these can affect membrane performance.

03

Are there any special handling issues?

Yes. The skin side of the membrane is delicate and can easily be scratched. The skin side should be handled with extreme care and placed only in contact with soft materials. Use gloves when handling the membrane.

Once the membrane is compressed in an O-ring it should remain in the cell as long as in use. The membrane can be reused within the test cell after the test cell has been flushed with dechlorinated water. After having been removed from the test cell the membrane should be discarded.

04

Is there a need to condition the membrane before first using it?

Place the membrane sheet in dechlorinated water and allow it to soak for 15-20 minutes. Transfer the membrane to the test cell and rinse with circulating dechlorinated water for about 5 minutes. Do not allow the membrane to dry out.

05

Is there an "aging" period?

Yes, similar to the "break-in" period for RO membranes, our membranes have an initial aging period. The membrane flux may drop 10 – 30% with a corresponding increase in selectivity (decrease in RSF) by 25 – 75%. While the aging period varies depending on operating conditions, we normally see the aging period completed within 1 week.

06

How well does the membrane reject contaminants?

Rejection of select components is shown in the table below.

Microorganisms	Log Reduction
Bacteria	>8
Virus	>6
Contaminant Rejection	% Rejection
Arsenic	>90.0%
Boron	>80.0%