

Instruction for use

PuraMem® Selective, Performance, Flux – Flat Sheet



GENERAL NOTES:

PuraMem® Selective, Performance and Flux membrane sheets are asymmetric polymeric membranes, and have a shiny side (the active membrane surface) and a matte side (the support layer). The membrane should always be installed in the filtration equipment with the active membrane surface facing the process solution. Flat sheet membranes are generally provided as DIN A4 sized (210x297 mm) sheets. The sheets generally lie flat, however some samples will have a tendency to curl – this is normal and special care should be taken when cutting disks from curly sheets. The membrane sheets should always be handled with care and not be folded.

INSTRUCTIONS FOR USE:

1. The shiny yellow side is the active surface of the membrane. Care should be taken to avoid scratching this surface where possible.
2. Cut the membrane to the correct size for the filtration test cell and insert in the filtration cell.
3. Once wetted, the membrane should remain wet and not be allowed to dry out. Using membranes that have dried-out will result in poor membrane performance and rapid failure.
4. Stable membrane performance is achieved after 3–4 hour of filtration.

5. Once wetted, the membrane should not be re-used after it has been removed from the filtration cell, even if it has been kept wet. As the sealing process in the filtration cell compresses the membrane at the seal point, any misalignment when the membrane is re-used will lead to leaks and by-passing of the membrane – this is undesirable as data generated with a misaligned membrane will not be representative of the membrane type.
6. Please store in dry condition and away from light.

SPECIFICATIONS

PURAMEM® SELECTIVE, PURAMEM® PERFORMANCE, PURAMEM® FLUX

General

- Membrane Material: Silicone-coated PAN
- Flat Sheet: 210 x 297 mm

SOLVENT STABILITY

- PuraMem® membranes are stable in mild and non-polar solvents:
 - e.g. Alcohols (e.g. Methanol, Ethanol, 2-Propanol)
 - Aliphatic hydrocarbons (e.g. Hexane, Heptane)
 - Aromatic hydrocarbons (e.g. Toluene, Xylene)
 - Butyl Acetate, Ethyl Acetate
 - Methyl-Ethyl-Ketone
 - Methyl-tert-Butyl-Ether
- PuraMem® membranes are not recommended for use in aqueous/water mixtures. For aqueous/organic solvent mixtures, please contact us for membrane recommendations.

USE CONDITIONS

Typical Operating Pressure (bar)	20–40
Maximum Pressure (bar)	60
Maximum Temperature (°C)	50
Allowable pH	7

PERFORMANCE

PuraMem® Selective, Performance and Flux are composite membranes. Molecules solubility (and not diffusion!) dominates the membrane separation. Therefore, the cut-off of the membrane is strongly dependent on the solvent-solute combination. MWCO obtained in one standard system is not characteristic for this type of membrane. Best suitable membrane for the application can be chosen by testing in real solution.

Permeate flux ^{1,2}

Solvent	Toluene	Heptane	Methyl-ethyl-keton	Ethanol
PuraMem® Selective	30	15	20	4
PuraMem® Performance	50	60	80	10
PuraMem® Flux	70	80	100	15

1 Data referring to membrane sheets with pure solvents. If you intend to use a solvent not listed above please contact us for further advice.

2 Minimal permeate flux, data are approximate and based on flat-sheet membrane. Test conditions: 30 bar and 30°C.

Disclaimer

This information and all technical and other advice are based on Evonik's present knowledge and experience. However, Evonik assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. Evonik disclaims all representations and warranties, whether express or implied, and shall have no liability for, merchantability of the product or its fitness for a particular purpose (even if Evonik is aware of such purpose), or otherwise. Evonik shall not be responsible for consequential, indirect or incidental damages (including loss of profits) of any kind. It is the customer's sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of the corresponding product, and does not imply that similar products could not be used.

Evonik Resource Efficiency GmbH

High Performance Polymers
Paul-Baumann-Straße 1
45772 Marl
Germany

Phone +49 02365 49-4800
emet@evonik.com
www.puramem.com