PERVATECH

Datasheet: Hybrid Silica AR Membranes

Hybrid Silica AR membranes have hydrophilic characteristics, meaning that the water content of the feed passes preferentially through the membrane.

Membranes:

Dimensions:	1-channel tube 250 x 10 x 7 mm, effective area 0,005 m^2
	1-channel tube 500 x 10 x 7 mm, effective area 0,010 m^2
	1-channel tube 1200 x 10 x 7 mm, effective area 0,025 m^2
Substrate material:	α-Al_2O_3
Top layer:	Hybrid Silica AR
Coating position:	Inside of the tube

Limits of operation

Temperature:	150 °C
Pressure:	max. 10 bar
pH:	0,5-8,5

Handling, storage and cleaning

Handling:	Wear clean gloves in order to prevent contamination with fungi.
Warning:	The membranes are brittle and cannot withstand shock, excessive vibration nor mechanical bending forces.
Storage:	The membranes can be stored in a dry place under ambient conditions. To prevent the risk of fungi growth on the ceramic element the relative humidity should not exceed 60%.
Cleaning:	At the end of the standard dehydration process flush the element with clean solvent or demineralized water (max. 50 °C). CIP the element with appropriate means. This is either with its own solvent or typically 0,5% to 1% enzymatic neutral non-ionic detergent. In some cases special CIP procedures might be applicable. Sterilize with formaldehyde (1%) or sodium azide (<0.01%) or equivalent. Please consult Pervatech for more information or consult the separate cleaning datasheet.

Possible applications with hydrophilic membranes

- Breaking of azeotrope
- Removal of water from organics e.g. alcohols, aprotic solvents, DMAc, DMSO, DMF, NMP, phenol, THF, ACN, esters, acetates, ketons or acids
- In situ dehydration of condensation reactions
- Dehydration of essential oils
- Separation of low Mw from higher Mw solvents (purification)

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