科学材料站
SCI Materials Hub

fumasep® FAB-PK-130

General

Membrane type: Anion-exchange membrane - PK-reinforced - thickness 130 µm - with high proton blocking capability, high selectivity, very high mechanical stability, and high stability in acidic and caustic environment.

Application: Electrodialysis and electrodialysis with bipolar membranes.

Membranes are identified by membrane type and identification number (Lot No). Please refer to this type and identification number in case of queries.

Delivery

The membrane is the brown foil delivered in dry form.

Handling and Storage

Keep membrane package closed / sealed when unused. Store, handle and process the membrane in a clean and dust-free area. Use only new and sharp knives or blades, when cutting the membrane. Always wear protective gloves when handling the membrane. Handle with care, be sure not to puncture, crease or scratch the membrane, otherwise leaks will occur. All surfaces in contact with the membrane during handling, inspection, storage and mounting must be smooth and free of sharp projections.

Wet form: Storage for short and medium time scale (hours up to several weeks) may be done in unsealed containers in 0.5 – 1.5 wt% NaCl solution or comparable neutral pH electrolytes. For storage over a longer time period a sealed container is recommended using afore said electrolyte with biocide to avoid biological fouling.

Pretreatment

The membrane is delivered in bromide form and dry form. If additional cleaning is required rinse the membrane either in the application solution or a NaCl solution according to the application requirement. Do not let the membrane dry out since micro-cracks may likely occur during drying.

If you have any concerns about storage, chemical stability, pre-treatment or before proceeding, please feel free to contact us for further information.

Physical and chemical data

fumasep®		FAB-PK-130
membrane type		anion exchange membrane
appearance / colour [a]		brown, transparent
backing foil		none
reinforcement		PK
counter ion		bromide (Br-)
delivery form		dry
thickness (dry)	µm	110 – 150
ion exchange capacity (in Cl- form)	meq g^{-1}	0.8 – 1.1
area resistance in Cl- form [b]	Ω cm²	< 8,5
selectivity 0.1 / 0.5 mol/kg KCl at T = 25 °C [c]	%	> 93
dimensional swelling in H$_2$O at T = 25 °C [d]	%	0
proton transfer rate [e]	nmol min^{-1} cm^{-2}	< 500
Young's modulus at 23 °C / 50 % r.h. [f]	MPa	> 1000
tensile strength at 23 °C / 50 % r.h. [f]	MPa	40 – 70
elongation at break at 23 °C / 50 % r.h. [f]	%	10 - 30
burst point test in water at T = 25 °C	bar	> 3

a) the color of the product may vary slightly.
b) in Cl- form in 0.5 M NaCl @ T = 25 °C, measured in standard measuring cell (through-plane).
c) determined from membrane potential measurement in a concentration cell.
d) in Br- form, membrane as received stored in water for 24 hrs, reference membrane as received.
e) determined from pH potential measurement in a concentration cell 0.1 M HCl / 0.1 M NaCl @ T = 25 °C.
f) determined by stress-strain measurement at T = 25°C and 50 % r.h., according to DIN EN 527-1.

Note: The product is not certified for drinking water applications. The data are not measured directly on the item supplied. The data sheet does not release the customer of the necessity of a goods inwards control procedure. All information included in this data sheet is based on tests and data believed to be reliable. The data do not imply any warranty or performance guarantee. It is the user's responsibility to examine performance, suitability and durability of the product for the intended purpose. FUMATECH BWT GmbH does not assume any liability for patent infringement resulting from the use of this product.

Hereby, it is certified that all results of the measured item comply with the margins of the internal specification defined in the technical datasheet. All measurements and data recording are conducted in accordance with standardized procedures following the ISO 9001 certification.