

# fumasep® FKS

## General

The membrane type fumasep FKS is an ion exchange membrane with high chemical stability, good selectivity and conductivity, intended for use in standard demineralisation applications in electrodialysis.

Membranes are identified by membrane type and identification number (Lot.-Number). Please refer to this type and identification number in case of queries.

## Handling and Storage

Handle with care, be sure not to puncture, crease or scratch the membrane, otherwise leaks will occur. All surfaces which may get into contact with the membrane during inspection, storage, pretreatment and mounting must be free of sharp edges or angles.

To control and minimise wrinkling it is recommended to expand membranes before cutting and module assembly by equilibration in the process solution for sufficient time.

After pretreatment do not let the membrane dry out since micro cracks may likely occur during shrinkage. We recommend to expand the membrane in the process solution before cutting and stack assembly.

Storage for short and medium time scale (hours up to several days) may be done in unsealed containers in 3-5 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 ca. 100 ppm biocide ( $\text{NaN}_3$ ) to avoid biological fouling.

## Pretreatment and Conditioning

For optimal performance minimal wrinkling and lowest electrical resistance it is necessary to pretreat membranes after following prescription:

Put the membrane samples in demineralized water either for 6 h at room temperature or for at least 2 hours at 60 °C (140 F).

To be sure to have the membrane in  $\text{H}^+$  form put the membrane for 1 h in 1 M  $\text{HNO}_3$  or 0,5 M  $\text{H}_2\text{SO}_4$ .

After rinsing with demineralised water the membrane is ready for use.

If you have any concerns about storage, chemical stability and pretreatment before proceeding, please feel free to contact us for further information.



**Physical and chemical data**

fumasep FKS, cation exchange membrane, PA reinforced		
selectivity **)	%	>96
electric resistance *)	$\Omega \cdot \text{cm}^2$	< 8
stability	pH	5-13
thickness ***)	mm	0,11 –0,13
ion exchange capacity	meq/g	>1
specific conductance	mS/cm	>5 ****)

\*) measured in Sodium form in 0,5 M NaCl @ RT 25°C)

\*\*) determined from membrane potential measurement in a concentration cell 0,1/0,5 M KCl @ 25°C

\*\*\*) in wet form

\*\*\*\*) determined in Na<sup>+</sup> -form in 0,5 NaCl @ RT (30°C)

Please note: The measuring data are not measured directly on the item supplied. The data correspond with the measurement of our quality control.

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