

fumasep® FS-930

General

Membrane type: Fluorinated cation-exchange membrane – non-reinforced – thickness 30 µm, with low resistance and high stability in acidic environment.

Application: Electrochemical processes requiring cation exchange membranes with high oxidative stability such as Redox-Flow Batteries etc.

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

Delivery

The membrane is the transparent foil, supplied on a backing foil (colorless rigid PET foil). Carefully separate the membrane from the backing foil. The membrane is ready to use.

Handling

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. To assure safe handling prevent contact with skin and eyes. Apply sufficient room ventilation and avoid inhalation close to the membrane (use fume hood). 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.

Pretreatment

The membrane is supplied in H-form and dry form, however some remaining water and / or solvents can be present in the product, which can be easily removed by soaking in DI water (before or after assembling, dry assembling is recommended). If additional cleaning is required rinse the membrane in either the application solution or deionized water according to the application requirement. Membranes will expand and contract based on electrolyte content.

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

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Technical Data Sheet - fumasep® FS-930

Physical and chemical data of fumasep® FS-930

fumasep®	unit	FS-930
membrane type		cation exchange membrane
appearance / color ^{a)}		transparent
backing foil		PET
reinforcement		none
counter ion		H ⁺ form
delivery form		dry
thickness (dry)	µm	25 – 35
weight per unit area	g m ⁻²	55 – 75
area resistance in 0.5 M H ₂ SO ₄ ^{b)}	Ω cm ²	< 0.1
selectivity 0.1 / 0.5 mol/kg KCl at T = 25 °C ^{c)}	%	> 99
dimensional swelling in H ₂ O at T = 25 °C ^{d)}	%	< 10
Young's modulus at 23 °C / 50 % r.h. ^{e)}	MPa	> 200
tensile strength at 23 °C / 50 % r.h. ^{e)}	MPa	> 25
elongation at break at 23 °C / 50 % r.h. ^{e)}	%	> 140
burst test in water at T = 25 °C	bar	> 3
Version ^{f)}	2.3	Valid from August 3 rd 2021

a) the color of the product may vary slightly.

a) in 0.5 M H₂SO₄ solution @ T = 25 °C, measured in two-electrode cell (through-plane).

b) determined from membrane potential measurement in a concentration cell.

d) membrane as received versus stored in water for 24 hrs.

e) determined by stress-strain measurement at T = 25 °C and 50 % r.h., according to DIN EN 527-1.

f) Changes without prior notices may apply.

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. fumasep® is a trademark of company FUMATECH BWT GmbH.

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.

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