

fumapem[®] AP-30

General

Membrane type: Based on polybenzimidazole copolymer - non-reinforced - thickness 30 µm.

Application: High-temperature PEM fuel cell (HT-PEMFC). Reformat system.

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 brown foil delivered in dry non-doped form.

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. 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.

Doping with Phosphoric Acid

The doping shall be done by user. A general non-binding recommendation: Soak the membrane in 85 wt % H₃PO₄ at room temperature. Rise the temperature up to 130-140 °C and keep it for at least 6 hours. Membranes must be soaked completely in phosphoric acid. Please consider the membrane will expand during the doping process. Good performance of membrane is achieved when doping level reaches at least 280 % since the performance depends strongly on the doping level. Be sure no significant colour change of the phosphoric acid is observed at the end of doping procedure. This can happen by over-doping, which has also negative impact on mechanical properties of membrane.

Remark: FUMATECH bears no responsibility for applied doping procedure.

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

Specifications

fumapem®		AP-30
polymer type		PBI copolymer
reinforcement		none
backing foil (support)		none
appearance (colour)		brown, transparent
thickness	µm	25 - 35
weight per unit area	mg cm ⁻²	6 – 7.5
thermal stability	°C	up to 300
Recommended doping level	%	280 – 350
Area resistance @ 160 °C, dry conditions	mOhm.cm ²	< 130
solubility		insoluble
residual solvent content	%	< 5

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.

Specification issued on May 12th 2017.

**Contact us for any questions
or sales information:**

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