

## Futuron FTCM-II

### General

**Futuron FTCM-II** is our cation-exchange membrane product with high perm-selectivity, low electrical resistance, high stability in acidic and caustic environment.

Application: Electrodialysis and bipolar electrodialysis (with bipolar membrane).

### Futuron FTCM-II Manual

#### *Delivery*

The membrane is supplied in wet form (soaked in 0.5 – 1.5 wt.% NaCl solution). Do not let the membrane dry out, since shrinkage may cause damage to the membrane.

#### *Storage and Handling*

Ensure unused membrane packages remain closed/sealed. Store the package away from direct sunlight in a well-ventilated area with temperatures maintained between 15 and 25 °C. Only open the membrane package when it is intended for immediate use and process it promptly after opening. Handle and process the membrane in a dust-free environment. When cutting is necessary, use only new and sharp knives. Ensure proper personal protective equipment (PPE) including protective gloves and safety glasses are in place when handling and processing the membrane. Avoid puncturing, creasing, or scratching the membrane to prevent leaks.

The membrane is ready for immediate use as supplied. However, pretreatment by soaking in DI water or a NaCl solution is recommended to remove potential residual additives or solvents in the product.

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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## Physical and Chemical Properties of Futuron FTCM-II

Properties	Units	FBTM
Membrane Type		Cation-Exchange Membrane
Color		Dark Brown
Thickness (dry) <sup>①</sup>	μm	320~350
Burst Strength	kg/cm <sup>2</sup>	≥2.5
Perm-Selectivity <sup>②</sup>	%	≥98
Ion Exchange Capacity	meq/g	1.8~3.0
Electrical Resistance <sup>③</sup>	Ω·cm <sup>2</sup>	3.0~6.5
pH Stability <sup>④</sup>		0-14
Operating Temperature Range	°C	15~40
Available Sizes	cm	120x60; 80x40; 40x20; 30x10
Technical Data Version <sup>⑤</sup>	1.0	Valid from January 1 <sup>st</sup> , 2024

① The thickness of Futuron membrane can be adjusted according to suit specific applications. Other properties may be affected when the thickness is adjusted.

② Perm selectivity measured at 0.1-0.2 M KCl solution at 25°C

③ Electrical resistance measured in 0.1 M NaCl solution at 25°C

④ Tested for >2000 hours in 6 M NaOH solution and in 6 M HCL solution at 25°C. Loss of burst strength <10%

⑤ Changes without notices may apply.

Note: The data are not measured directly on the item supplied. All information included in this data sheet is based on tests and data FUTURON believes 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. FUTURON LLC does not assume any liability for patent infringement resulting from the use of this product.

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