



Nafion™ N2050

Ion Exchange Materials

Product Information

Nafion™ N2050 is the latest development in the high performance family of membranes offered by Chemours. It uses the same proven polymers as Nafion™ N2030, while exhibiting significantly lower voltage. Nafion™ N2050 shares the same reinforcement as Nafion™ N982 and Nafion™ N2030, ensuring safe and reliable operation. Nafion™ N2050 is a high performance membrane for narrow and zero gap electrolyzers in the production of chlorine and 30–35% caustic soda.

- Reinforced for safe operation
- Modified on both the anode and cathode surface to enhance gas release
- Supplied in WX, PW, and TX forms

Performance

Membrane Type	Laboratory Cell		Tensile Strength, kgf/cm
	Cell Voltage, V	Current Efficiency, %	
Nafion™ N2050	<2.96 ^a <3.06 ^b	>96	>4
Nafion™ N2030	<3.02 ^a <3.10 ^b	>96	>4

^a Conditions: Zero gap, 0.0100 m², activated anode, activated cathode, 32% NaOH, 200 g/L anolyte, 90 °C (194 °F), 6.0 kA/m²

^b Conditions: Zero gap, 0.0045 m², DSA anode, activated nickel cathode, 32% NaOH, 200 g/L anolyte, 90 °C (194 °F), 4.0 kA/m²

Form

Membrane in WX form is pre-expanded in hot water and shipped wet in pH 10 solution. WX is an easy to use membrane and less prone to damage during handling. Refer to technical bulletin T-04, “Nafion™ Membrane WX Products,” for more information. Membrane in the PW form is pre-expanded at room temperature and shipped with a neutral pH.

Membrane in TX form is pre-expanded and ready to install directly into chloralkali electrolyzers without any pretreatment. Refer to technical bulletin T-05, “Nafion™ Membrane TX Products,” for information on TX membranes.

To ensure optimum performance of Nafion™ N2050 in a commercial electrolyzer, please contact your representative for Nafion™.

Note: The side marked CATH must be installed facing the cathode; otherwise, the membrane will be irreversibly damaged in use.

Size and Packaging

Nafion™ membranes are available in custom sizes with widths up to 1.5 meters and lengths up to 4 meters. The size availability of this product may vary; please contact your local representative for Nafion™.

WX and PW Membrane

Small sheets are sealed in polyethylene pouches and shipped flat in wooden containers. Large sheets are rolled on plastic tubes, wrapped with a polyethylene sheet, and shipped in a watertight plastic container.

TX Membrane

Small sheets are sealed in pouches and shipped flat in wooden containers. Large sheets are rolled on a polyethylene-covered fiberboard tube, wrapped with a polyethylene sheet, and shipped in a plastic container.

The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits nor used alone as the basis of design. This information is based on technical data that Chemours believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. This information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Because conditions of product use are outside our control, Chemours makes no warranties, express or implied, and assumes no obligation or liability in connection with any use of this information or for results obtained in reliance thereon. The disclosure of the information is not a license to operate under or a recommendation to infringe any patent of Chemours or others.

Medical Statement: Please contact your Chemours representative to discuss limitations regarding medical applications.

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