

## PNB™-R45 Technical Data Sheet

Property	Value	Test Method
Thickness	Dry: 45±3 µm Hydrated (Bromide form): 55±3 µm	Micrometer
Reinforcement	Olefin	
Ion Exchange Capacity	3.5 meq/g	Ion Chromatography, titration, NMR
Conductivity	70±5 mS/cm (OH <sup>-</sup> form at 25°C)	In-plane
Tensile Strength	> 30 MPa	Instron
Young's Modulus	> 1.0 GPa	Instron
Elongation at Break	> 35%	Instron
Dimensional Swelling	3% to 6% (at RT in H <sub>2</sub> O)	
Water Uptake	40% to 45% (at RT in H <sub>2</sub> O)	
Quaternary Amine Type	Trimethylammonium	
Polymer Glass Transition Temperature (T <sub>g</sub> )	170°C to 190°C	DMA
Counter-ion as-received	Bromide	