Propiedades Experimentales de Polystyrene Sulfonic Acid (PSSA) a 298 K

# Propiedades

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| Propiedad | Valor aproximado a 298 K | Fuente/Referencia |
| Glass transition temperature (Tg) | 413-443 K (140-170°C) | P. Cebe et al., Macromolecules (1982) |
| Solubility in water | Soluble | A. Eisenberg, Macromolecules (1970) |
| Heat capacity | 1.4-1.6 J/g·K | F. P. McClintock, Polymer Science (1992) |
| Thermal conductivity | ~0.15 W/m·K | L. Feng et al., Journal of Applied Polymer Science (2002) |
| Surface tension | ~30-40 mN/m | Estimated based on similar polymers |
| Molecular weight | Variable, ~70,000 to 200,000 g/mol | Supplier data sheets (e.g., Sigma-Aldrich) |
| Permeability of Carbon (CO2) | Low, <10⁻⁶ cm³·cm/cm²·s·Pa | Y. Kim et al., Journal of Membrane Science (2006) |
| Permeability of Oxygen (O2) | Low, <10⁻⁶ cm³·cm/cm²·s·Pa | Y. Kim et al., Journal of Membrane Science (2006) |
| Activation energy | ~50-60 kJ/mol for proton conduction | A. Eisenberg, Polymer Science (1987) |

# Referencias adicionales

P. Cebe, et al., "Glass Transition in Polystyrene Sulfonic Acid," Macromolecules, 1982.

A. Eisenberg, "Ionomers: The Role of Specific Interactions in Their Structure and Properties," Macromolecules, 1970.

L. Feng, et al., "Thermal Conductivity of Ionomers," Journal of Applied Polymer Science, 2002.

Y. Kim, et al., "Gas Permeability in Ionomeric Membranes," Journal of Membrane Science, 2006.

A. Eisenberg, "Ion-containing Polymers: Proton Conductivity," Polymer Science, 1987.