

IC100: AGC's standard ionomer dispersion grade

- Perfluorosulfonic acid (PFSA) ionomer dispersed into an aqueous media (ethanol/water)
 - PFSA ionomer is an ion-exchange polymer in acid form, which is made from perfluorosulfonyl vinyl ether (PSVE) / tetrafluoroethylene (TFE) copolymer

Key Attributes

- Contains high polymer solid
- Enables formation of highly durable catalyst layers with less cracks, indicating excellent durability
- Could be used in both anode and cathode electrode catalyst layers and high cell voltage applications

Applications

- Proton Exchange Membrane Fuel Cell (PEMFC)
- Proton Exchange Membrane Water Electrolysis (PEMWE)

Composition of IC100

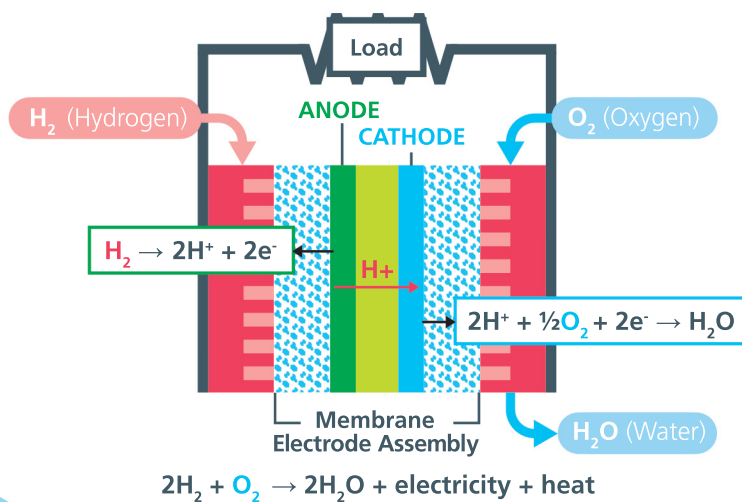
Component	Content (wt%)
PFSA Polymer	26 ± 2
Ethanol	44 ± 4
Water	30 ± 4

Basic Properties of IC100

Property	Value or Remark
Ion Exchange Capacity (IEC, H ⁺ polymer basis)	1.1 meq/g ± 0.1
Equivalent Weight (EW, H ⁺ polymer basis)	909 g/eq median
Viscosity (at 76 sec ⁻¹)	300 mPa·s ± 100
Color (APHA/Hazen scale)	<100 (Colorless, Transparent)

PEMFC: Proton Exchange Membrane Fuel Cell

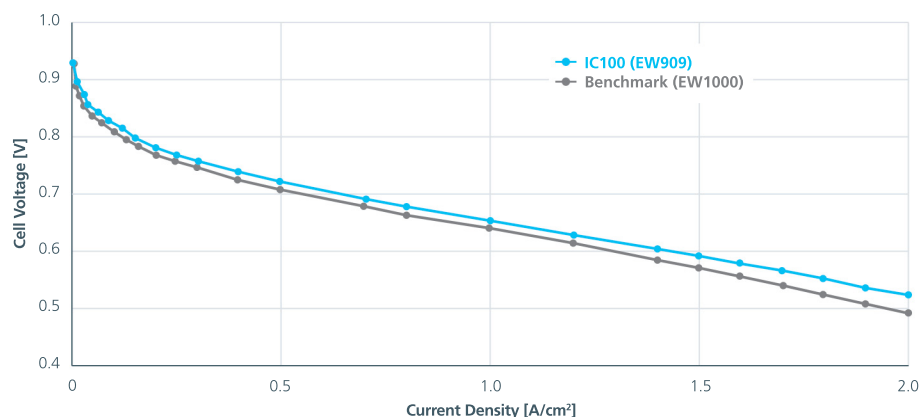
Generates electricity by use of hydrogen and oxygen.



Usage Example

Catalyst Layer	Ink Preparation	Dispersion	Annealing
Catalyst: TEC10E50E (TKK) I/C: 0.8 Pt: Cathode 0.2 mg/cm ²	Solid: 10 wt% Solvent ratio: Water/Ethanol = 6/4	300 rpm / 1 hr by planetary ball mill	150°C, 15 minutes

Condition 1: 80°C, 100% RH, 50 kPa H₂/Air



Notice to Customers: Purchasers of this product are required to submit a written agreement regarding prohibition of resale to any third party and not to use for any other purposes without prior consent.

Supply Options

- Available from 800g-dispersion (1L plastic bottle)

Recommended Storage Conditions

Please store at 0-30 °C in the original containers. Keep the container tightly sealed so that solvent evaporation does not cause a viscosity change. Store the container indoors, and avoid exposing the container to direct sunlight, rain, or snow.

Please be careful not to freeze the IC100 in the winter. Please use it as soon as possible before the characteristics change.

Handling Instructions

- IC100 is a hazardous material that contains ethanol, a flammable solvent. Refer to Safety Data Sheet (SDS) for further handling information.
- Data listed here are measured values at AGC and are not guaranteed values.



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