

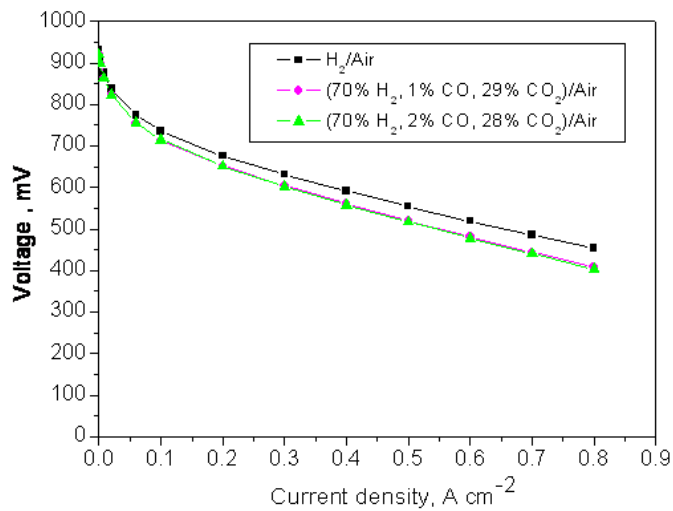
Advent TPS® HT MEAs

The Advent Technologies high temperature (150-200°C) MEA is based on a pyridine type proprietary ADVENT TPS® polymer electrolytes. The ADVENT TPS® technology is polybenzimidazole (PBI) free, less expensive than the competition, allows the use of fuels with high CO content and reduces the complexity and the cost of the final HT PEM fuel cell system.

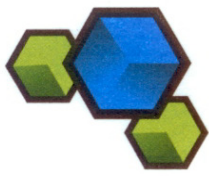
Advent TPS® HT MEA characteristics

- Operational temperature 150-200°C
- Pyridine based aromatic polyether electrolyte
- High carbon monoxide tolerance
- Long term stability with very small voltage drop
- Zero degradation under cycling operating conditions
- Endurance under differential pressure
- No need for humidified gases
- Low cost

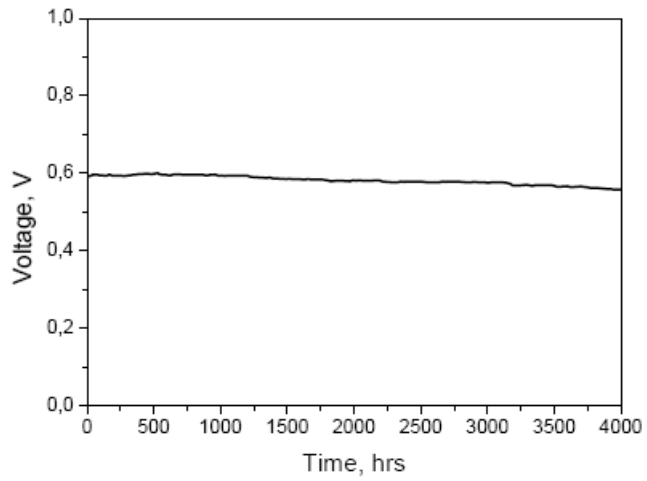
Advent TPS® HT MEA performance at 180°C with reformate gas: High CO tolerance



Ambient pressure
Feed: H₂/air
Anode: 1.2
Cathode: 2.0

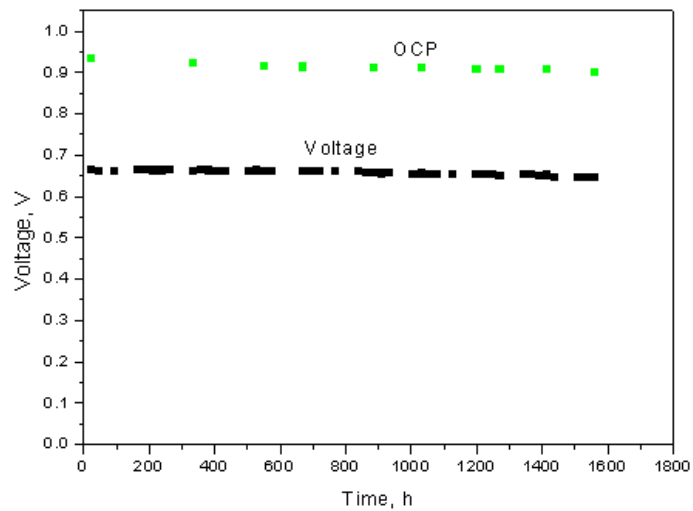


Operational stability – More than 4000 hrs of continuous operation



Current density: 0.2 A/cm²
 Temperature: 180°C
 Ambient pressure
 Feed: H₂/Air
 Anode: 1.2
 Cathode: 2.0

New generation HT MEA: over 1500hrs continuous operation with zero degradation



Current density: 0.2 A/cm²
 Temperature: 180°C
 Ambient pressure
 Feed: H₂/Air
 Anode: 1.2
 Cathode: 2.0