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News Release

AGC's FORBLUE™ i-SERIES Fluorinated Electrolyte Polymer Dispersion Adopted as Electrode Material for PEM Water Electrolysis Demonstration System

Tokyo, May 19, 2026—AGC (AGC Inc., Headquarters: Tokyo; President: Yoshinori Hirai) a world-leading manufacturer of glass, chemicals and other high-tech materials, today announced that its FORBLUE™ i-SERIES fluorinated electrolyte polymer dispersion has been adopted as an electrode material for a 5MW-class polymer electrolyte membrane (PEM) water electrolysis demonstration system. The system was jointly developed by Toyota Motor Corporation (Headquarters: Aichi Prefecture; President: Kenta Kon; hereinafter "Toyota") and Chiyoda Corporation (Headquarters: Kanagawa Prefecture; President: Koji Ota). The FORBLUE™ i-SERIES was used in the water electrolysis system installed at Hydrogen Park at the Toyota Honsha Plant in March 2026, where it will be evaluated under actual operating conditions.

Fluorinated Electrolyte Polymer Dispersion FORBLUE™ i-SERIES

PEM water electrolysis demonstration system (Image provided by Toyota)

FORBLUE™ i-SERIES is a fluorinated electrolyte polymer dispersion developed based on ion-exchange membrane technology cultivated through the AGC Group's long experience in the chloro-alkali business. It is used in electrodes and electrolyte membranes for fuel cell vehicles (FCVs). By incorporating AGC's proprietary polymer design and durability-enhancing technologies, the product offers long-term stability under harsh operating conditions as well as excellent processability.

AGC's FORBLUE™ i-SERIES has been adopted as an electrode material for the fuel cells used in Toyota's second-generation MIRAI, contributing to the commercialization and wider adoption of FCVs. Building on this track record in automotive applications, the product has now been selected for use in the electrode material for the water electrolysis demonstration system.

Through this application, the FORBLUE™ i-SERIES will be utilized not only in applications that "use" hydrogen, such as fuel cells, but also in hydrogen production systems that "produce" hydrogen, thereby expanding its range of applications and contributing more broadly toward the realization of a hydrogen-based society.

Under its medium-term management plan ***AGC plus-2026***, the AGC Group has identified three types of societal values to be created through its products and technologies. This initiative aligns with the Group's societal values,

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particularly to “Innovation”, which aims to create an innovative future society, and to “Blue planet,” which seeks to realize a sustainable global environment. AGC will continue to contribute to the advancement of a hydrogen society and a carbon-neutral society through its materials technologies.

Reference

- Press release related to this product
  AGC’s FORBLUE™ i-series Electrolyte Polymer Dispersion for Fuel Cells Receives Industrial Contribution Award from the Fuel Cell Development Information Center in Japan_May 16, 2022

- FORBLUE™ i-SERIES product website

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