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Toagosei Co., Ltd.

## **Two of Toagosei's High Performance Adhesives Selected for the Toyota Mirai**

Toagosei Co., Ltd. announced today that two of its high performance adhesives were chosen by Toyota Motor Corporation for use on its new fuel cell vehicle called the Mirai which was released in December 2020.

### **1. ARONIX UVX: UV-curable adhesive**

This adhesive, which is based on our UV-curable resin, ARONIX, enhances the adhesiveness and spreadability of the adhesive itself between the electrolytic membrane and inner parts of the fuel cell battery that are difficult to attach. It also serves as an adhesive seal that prevents gas leaks within a fuel cell battery. Moreover, the UV-curability greatly reduces the assembly process time and increases productivity.

### **2. Aron Melt: specially modified olefin hot melt adhesive**

This adhesive, which is a specially modified olefin hot melt, provides strong adhesion between metal separators used in fuel cell batteries, securing the path of gas flow.

Fuel cell vehicles are powered by motors using the electricity generated through the reaction between hydrogen and oxygen in hundreds of stacked fuel cell sheets. These two newly developed high performance adhesives were selected to ensure the path of flow of hydrogen and oxygen within the fuel cells, to create a better water drainage seal for the water generated, and to glue inner components of the cells together.

Both of these adhesives play an important role in the power generation system of the fuel cell batteries considered the heart of a fuel cell vehicle. They also meet the durability and reliability required for use in automotive applications.

Going forward, we will continue to conduct research and development to improve the function and productivity of fuel cell batteries. At the same time, we will promote the establishment of a hydrogen station for fuel cells vehicles that utilize hydrogen generated from the electrolysis plant of our Tokushima Plant (Tokushima City, Tokushima Prefecture) to contribute to the realization of a decarbonized society in 2050 and widespread penetration of fuel cell vehicles.

Reference) Source: Toyota Motor Corporation



The new Toyota Mirai



The new Toyota Mirai's fuel cell unit

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