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**Mitsubishi Rayon's SMC Adopted for
Rear Door Frame of Toyota's New Prius PHV**

Mitsubishi Rayon Co., Ltd.

Mitsubishi Rayon Co., Ltd. (Headquarters: Chiyoda-ku, Tokyo; President: Hitoshi Ochi, hereinafter "MRC") announced that its carbon fiber sheet molding compound (SMC) has been adopted for the rear door frame of the new Prius PHV, which was launched by Toyota Motor Corporation (Headquarters: Toyota City, Aichi Prefecture; President: Akio Toyoda, hereinafter "Toyota") on February 15, 2017.

In line with the tightening of fuel efficiency regulations and carbon dioxide emission controls, interest in vehicle weight reduction has been growing in the automotive market and carbon fiber reinforced plastic (CFRP) that combines lightweight with high strength is expected to find application in automotive components. Meanwhile, the scope of application of CFRP has been limited to models like luxury cars that are produced in limited quantities because production of CFRP-made components takes time and results in high costs. In recent years, however, development of materials and production methods for CFRP has been advanced, and automakers are stepping up full-scale adoption of CFRP components for their mass-production vehicles as well.

SMC developed by MRC is a type of intermediate material for CFRPs and a sheet-shaped material in which carbon fibers cut into several-centimeter lengths are dispersed in resin. The SMC can be processed into components in a short period of time, i.e. roughly 2 to 5 minutes, by press molding. In contrast to prepreg intermediate materials (uncut carbon fiber fabric impregnated with resin), this SMC features high formability for molding complicated shaped parts. It also exhibits close-to-uniform mechanical properties. This allows engineers to readily use the carbon fiber material by utilizing existing parts design know-how and achieve lighter components with higher strength.

MRC's SMC has been adopted for Toyota's new Prius PHV because its advantages have earned high recognition from the automaker. These advantages include a substantial reduction in the vehicle's weight, the achievement of a great component performance, an excellent formability that enables production of complicatedly shaped components, and productivity necessary for manufacture of components for mass-produced vehicles. With this adoption as an impetus, MRC will actively and extensively promote the use of its carbon fiber materials for automotive components.

Under the Mitsubishi Chemical Holdings Group's APTIS 20 Medium-Term Management Plan, which aims for achieving sales of JPY 100 billion from the carbon fiber and composite material business in 2020, MRC will actively expand its operations targeting fast-growing automotive applications and other industrial areas.



【Toyota's New Prius PHV】



【MRC's SMC adopted by the rear door frame of the new Prius PHV】



【MRC's SMC (Sheet Molding Compound)】

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