

**Plastics e-Axle Study Program is granted as a part of
“R&D and social implementation promotion program for energy-saving technologies
for the realization of a carbon-free society.” by NEDO**

Tokyo, Japan –November 1, 2021 Sumitomo Bakelite Co., Ltd. (TOKYO: 4203 HQ: Shinagawa-ku, Tokyo, President and Representative Director: Kazuhiko Fujiwara) "Plastics e-Axle Study Program" driven by "Next e-Axle Market Development Promotion Project Team (NeA)" was granted by New Energy and Industrial Technology Development Organization (NEDO) as "R&D and social implementation promotion program for energy-saving technologies for the realization of a carbon-free society." in 2021.

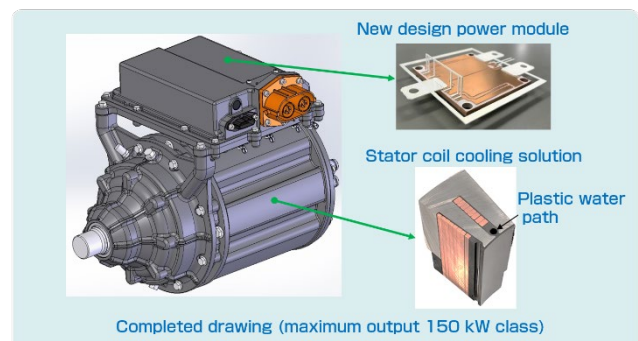
It will materialize Carbon Free Society by applying our High Performance Plastics Materials onto Automotive Electrification which shows highly growth potential.

"Next e-Axle Market Development Promotion Project Team" was established in January 2020 for expanding to apply our high-performance plastic materials to e-Axle. In order to accelerate the study, it has been applied to the NEDO's carbon free program. And it is granted due to high energy saving effects (Reduction in crude oil equivalent of approximately 500,000 kL/year and carbon dioxide equivalent of approximately 2.4 million t/year: 2040/Japan) of it.

Major technologies on the study are categorized (1) to (5), as shown below. It will create the benefits "Minimization of Size, Weight, Vibration & Noise" and "Optimization of Thermal Management" on e-Axle.

■ **Development of application of resin to e-Axle**

- (1) Development of direct cooling structure for stator coil
- (2) Development of Power Module with compact and high thermal management performance
- (3) Development of plastic housing (Inverter case and motor housing)
- (4) Development of high-speed rotation rotor
- (5) Development of evaluation technology for e-Axles



By the end of this fiscal year, e-Axle (Our Owned Design) will be assemble with special plastic parts. It will show a maximum output of 150 kW. After that, it will be tested on the bench and shows specific performance improvements such as improved cooling efficiency. E-Powertrain Engineer in OEM and Tier1 will be intersted in our evidence, , whole over the world. This study will not only enable us to sell products, but will also enable us to provide technologies that contribute to the development of our customers' products, thereby further expanding our company's business and contributing to the realization of a decarbonized society.

For inquiries on this product:

Sumitomo Bakelite Co., Ltd., Next e-Axle Market Development Promotion Project Team

E-mail: nea@ml.sumibe.co.jp