

Mitsubishi Chemical's DURABIO™ Bio-Based Engineering Polymer Adopted for Radar Covers on Three Isuzu Truck Models: Contributes to Shift Towards CASE Technologies

Mitsubishi Chemical Corporation

DURABIO™ bio-based engineering polymer developed by Mitsubishi Chemical Corporation (MCC; Head office: Chiyoda-ku, Tokyo; President: Masayuki Waga) has been adopted for the radar covers on three trucks: the light-duty ELF, medium-duty FORWARD, and heavy-duty GIGA produced by Isuzu Motors Limited (Isuzu; Head office: Shinagawa-ku, Tokyo; President: Masanori Katayama). The radars on these trucks are used for cross traffic alerts and blind spot monitoring (BSM). This is the first time that DURABIO has been adopted for truck parts.

BSM Radar Covers on the Three Models (Photo courtesy of Isuzu)



The automotive industry is increasingly incorporating connected, autonomous, shared, and electric (CASE) technologies into its products, including trucks and other commercial vehicles, and this is predicted to boost the use of internal and external automotive radars and sensors. In response to this trend, MCC is accelerating development of new applications for DURABIO as a material suited to such parts.

DURABIO is a bio-based engineering polymer made from renewable plant-derived isosorbide. It features excellent performance, offering higher resistance to impact, heat, and weather than conventional engineering polymers. Additional benefits include ease of coloring—DURABIO can be simply mixed with pigment to create glossy, highly reflective surfaces—as well as its hardness, enhancing durability and scratch resistance. These advantages eliminate the need for painting or coating processes, enabling emissions of volatile organic compounds (VOCs) from paints to be reduced during manufacturing. Making the most of these features, automakers are increasingly adopting DURABIO for interior and exterior design parts.

To reduce traffic accidents, Isuzu constantly develops trucks equipped with advanced safety devices, and DURABIO, which has excellent properties for use in electronic equipment, has been adopted for the covers of radars that detect vehicles, pedestrians, and other road users. Since DURABIO covers require no coating, any concern that coating could mask radio waves is eliminated, enabling detection area and sensing quality to be maintained. Isuzu rated DURABIO highly for its shock-resistance and weatherproofing properties, which are crucial for exterior parts, and for being an eco-friendly material aligned with Isuzu's approach to corporate social responsibility, which aims to contribute to the global environment and the sustainable development of society.

MCC will continue to develop new applications of DURABIO and contribute to environmentally friendly automaking.

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