

Eco-balance of Brose door systems improved by renewable raw material



Brose's door system made of wood-fiber reinforced polypropylene improves the Eco balance by using renewable raw materials, saves weight and provides both thermal and noise-reduction benefits.

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International climate targets lead to more stringent legal requirements worldwide. This applies to both CO₂ emissions and life cycle assessment (LCA) from development to the end of vehicle life. For these reasons, the use of recycled and/or recyclable materials as well as renewable raw materials is becoming increasingly important.

Another objective is to gain more independence from the price fluctuations of raw materials, such as crude oil-based plastics. The automotive supplier Brose provides a solution for door systems, which helps to reduce this dependency: A door system made of wood-fiber reinforced polypropylene. The use of this renewable, CO₂ neutral raw material also reduces weight and provides additional thermal and acoustic benefits at no extra cost.

The carrier plate of this integrative door system is made of polypropylene, which has been reinforced with 40 percent wood-fiber. This reduces the amount of plastics used by some 20 percent, compared to a glass fiber-reinforced solution. In addition to a greater independence from crude oil-based plastics, OEMs also benefit from a 6% weight saving. In the crash test this carrier plate material proves to be just as safe as glass-fiber reinforced polypropylene.

Vehicle tests have proved that the carrier material is as safe as glass-fiber reinforced polypropylene. It also contributes to enhancing thermal and acoustic insulation.

The system is complemented by a weight-reduced latch requiring less package space and a small lightweight window regulator drive with integrated electronics from the product portfolio of the mechatronic specialist.

System expertise from one source

In the course of just over 100 years, the family-owned company Brose has evolved from a component manufacturer to a leading system supplier. As the world market leader in door systems with a market share of over 30 percent, it supplied more than 13 million units from its

plants worldwide in 2010. In doing so, the supplier continuously pursues the principles of comprehensive system integration: Brose develops and produces all major door components such as window regulators, latch systems, drives and electronics in-house and can therefore offer automotive manufacturers just the right products to suit their needs, which interface with one another and the overall system perfectly.

Brose door systems are shipped, tested and ready to install “Just In Sequence” to OEM assembly lines. The benefits for the OEMs: tailor-made products that are manufactured worldwide with the same processes, technology, weight reduction, cost efficiency and consistently high quality of less than 10ppm.