

December 17, 2008

Toyota to Increase 'Ecological Plastic' in Vehicle Interiors

Tokyo — TOYOTA MOTOR CORPORATION (TMC) announces plans to increase use of plant-derived, carbon-neutral* plastics in more vehicle models, starting with a new hybrid vehicle next year. The TMC newly developed plastics, collectively known as "Ecological Plastic", are to be used in scuff plates, headliners, seat cushions and other interior vehicle parts. Within 2009, TMC aims for Ecological Plastic to account for approximately 60 percent of the interior components in vehicles that feature it.

There are basically two types of Ecological Plastic—that produced completely from plant-derived materials and that produced from a combination of plant- and petroleum-derived materials. Because plants play a role in either type, Ecological Plastic emits less CO₂ during a product's lifecycle (from manufacture to disposal) than plastic made solely from petroleum; it also helps reduce petroleum use.

Ecological Plastic adequately meets the heat-resistance and shock-resistance demands of vehicle interiors through the use of various compounding technologies, such as those allowing molecular-level bonding and homogeneous mixing of plant-derived and petroleum-derived raw materials. And being equal to conventional plastics in terms of quality and productivity means that it can be used in production vehicles.

TMC continues to develop various advanced technologies aimed at realizing sustainable mobility and believes that it is important to increase the availability of such technologies in the marketplace. As such, TMC became the first automaker in the world to use 100-percent plant-based plastics in production-vehicle interior parts when it launched the Japanese-market "Raum" in May 2003, featuring Ecological Plastic that used polylactic acid and other all-plant-based materials. TMC intends to pursue research and development and practical application that result in expanded use of Ecological Plastic in vehicle parts.

*Zero net CO₂ emissions over an entire product lifecycle

Reference: Ecological Plastic Application and Materials Used

Interior vehicle parts using Ecological Plastic	Where used	Combined raw materials	
		Plant-derived	Petroleum-derived
Scuff plates, cowl side trim, floor finish plate, toolbox	Throughout	Polylactic acid	Polypropylene
Headliner, sun visors, pillar covers	Covering (fibrous portion)	Plant-derived polyester	Polyethylene terephthalate
Trunk liner	Covering (fibrous portion)	Polylactic acid	Polyethylene terephthalate
Door trim	Base material	Kenaf fiber* and Polylactic acid	(Not used)
Seat cushion	Foam portion	Polyol derived from castor oil*	Polyol, isocyanate (cross-linking agent)

*Non-food source