Ford Looks to Mother Nature to Create Greener, Lighter Plastics

Soy-foam headliner. The 2010 Ford Escape and Mercury Mariner feature the industry's first soy-foam headliner for a 25 percent weight savings versus a typic glass-mat headliner

Soy-foam seats. The use of soy-based seat foams on more than 1.5 million Ford, Lincoln and Mercury vehicles today represents a reduction in petroleum usage of approximately 1.5 million pounds. Each 1-million pound reduction also equates to a net decrease of CO2 emissions of more than 5 million pounds per year

Post-industrial recycled fabric. Escape was the first vehicle in the U.S. to use seating surfaces made from 100 percent post-industrial recycled fabric – for a 64 percent reduction in energy consumption and 60 percent reduction in CO2 emissions

Post-consumer recycled underbody systems. Escape features underbody systems – splash shields, aerodynamic shields – made from post-consumer recycled resins such as detergent bottles, tires and battery casings. Used on all North American products in 2009, they divert upwards of 30 million pounds of plastic from landfills.

2010 Ford Escape Hybrid

Plastics Going Forward

How bio-based materials could help create lighter, greener plastics

Natural fiber-reinforced plastics

Early research shows a natural-fiber reinforced plastic component could weigh up to 30 percent less than a glass fiber-reinforced plastic.

Polylactic acid (PLA)

This biodegradable plastic could be used for textile applications such as vehicle carpeting and floor mats as well as interior trim pieces. PLA can biodegrade after its life cycle in 90 to 120 days versus up to 1,000 years in a landfill for a traditional, petroleum-based plastic.