

Ford's Global Ambitions Include Turning The World's Plastic Bottles Into Car Parts

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The next time you settle into the seat of a 2013 Ford Fusion, think about this: you're sitting on about 40 recycled plastic bottles.

Ford Motor has been a leader in the use of recycled materials, starting in 2008 with the upholstery in the Ford Escape hybrid. Back then, Ford had to go outside the auto industry to find a textile manufacturer capable of producing recycled fabric. Now, it's a condition for doing business with the Dearborn, Mich., carmaker. Starting in 2009, Ford now requires suppliers of any new seat to use at least 25 percent recycled fabric. As a result, two-thirds of Ford's North American vehicle programs now use fabric made from recycled yarns.

The redesigned Fusion, however, marks a new milestone with global implications: it is the first vehicle sold around the world to use recycled fabrics. After debuting in North America last fall, the Fusion recently went on sale in China and will soon be launched in Europe (as the Ford Mondeo). Once it hits full production globally, Ford's mandate for the use of recycled materials has the potential to recycle enough plastic bottles and postindustrial waste to make 1.5 million yards of fabric a year, the company says.

"The fabric being used in Fusion truly illustrates Ford's commitment to sustainability, regardless of any geographical borders," says Robert Brown, vice president, sustainability, environment and safety engineering. The company now has four global suppliers of recycled fabric. Overall, Ford uses 41 recycled fabrics across 15 vehicle lines globally – from Mustang and Fiesta to F-150 and Taurus.

With each global vehicle program, Ford has been able to increase its use of sustainable fabrics by researching new technologies and identifying suppliers that share its commitment to sustainability, said Carol Kordich, Ford's lead designer of sustainable materials. "Initially suppliers didn't think we were serious when we told them that our new corporate strategy required a minimum of 25 percent recycled content," she said. "But more and more suppliers started to increase their environmental R&D efforts."

Now Ford is working with innovative companies like Sage Automotive Interiors, based in Greenville, S.C., and Unifi, in Greensboro, N.C., to accelerate development of recycled fabrics. "Collaborating with companies that have the same mindset as Ford helped take us to the next level much faster," she said.

Other recycled items in the 2013 Fusion include soy-based foam in seat cushions; plastic underbody panels made from recycled car battery casings, and sound-absorption materials made from old denim.

"Ford is definitely a leader and the only one in the automotive market to put a marker out there that we need to hit," said Dan Russian, business manager at Sage, which is Ford's largest fabric supplier in North America. Prompted by Ford's specifications, he said Sage sped up its development plans for recycled fabrics by up to five years.

"Between ourselves and Unifi, we have a very good relationship," said Dirk Pieper, Sage's chief executive. "We're aligned from the top down, working diligently together to reduce the cost."

Ford pushed suppliers to develop closed-loop manufacturing processes, which had the added benefit of lowering costs. Unifi, for example, developed its own brand of yarn called REPPEVE, which is made from industrial waste and clear plastic water bottles, and is used primarily by apparel manufacturers. To make Ford seats, Unifi provides REPPEVE yarn to Sage, which uses it to weave the fabric that is then shipped to Lear, which assembles the seats. Any manufacturing waste, such as trimmings or bad dye lots, goes back to Unifi for reprocessing.

Meanwhile, Ford employees are getting in on the act, too. They're on a mission to collect about two million plastic bottles, which, if all goes as planned, will one day wind up back inside a Ford vehicle.