



## Trexel touts ability to help automakers save fuel

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PLASTICS NEWS REPORT

WOBURN, MASS. (Aug. 27, 1:15 p.m. ET) -- Trexel Inc. issued a major “green” claim: for a fleet of 100,000 cars, the company estimates automakers could reduce the carbon footprint of cars using Trexel’s MuCell on components by more than 6.3 million gallons of gasoline, along with carbon dioxide reductions of nearly 65,000 metric tons over the course of a car lifespan of 150,000 miles.

To get the numbers, Trexel, of Woburn, Mass., used specific mold trials and commercial applications for the Mucell microcellular foaming technology. Trexel hired environmental firm Simply Sustain LLC to determine MuCell’s environmental impact using a cradle-to-grave analysis.

“Until recently, most decisions to use the MuCell process were made on a piecemeal, part-by-part basis,” said Trexel President and CEO Stephan Braig. However, the industry is now recognizing the immense strategic potential that the MuCell process holds for reducing vehicle weight and costs.”

For the study, Trexel reviewed 70 components, representing about 194 pounds of vehicle weight. MuCell cut that by 35.4 pounds per car.

Trexel also released details about two automotive applications in Europe: airbag covers, engine valve covers.

TRW Automotive MuCell to injection mold airbag covers on Volkswagen AG’s Tiguan compact crossover vehicle, that feature no sink marks, excellent dimensional stability and design freedom compared with traditional solid injection molding, according to Trexel.

MuCell also allowed TRW to use smaller injection presses, with clamping forces of 300 tons, versus 500-ton machines.

MuCell’s foaming cell growth happens in the mold, which can replace the traditional pack phase, so the application may be designed for function, not for traditional plastics processing. For example, ratios of rib-to-wall thickness can be optimized for performance, not just to eliminate sink marks.

Also, with conventional injection molding, you need a separate secondary operation to laser-cut the back side of the airbag cover. MuCell makes it easier to mold in tear seam lines and a living hinge, by using variable wall thicknesses.

ElringKlinger AG of Dettingen, Germany uses MuCell to mold two-piece nylon valve covers for VW’s 1.6 liter and 2.0 liter diesel engines. Dimensional stability is key, because part flatness is critical. The German molder also could use smaller-tonnage presses.

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