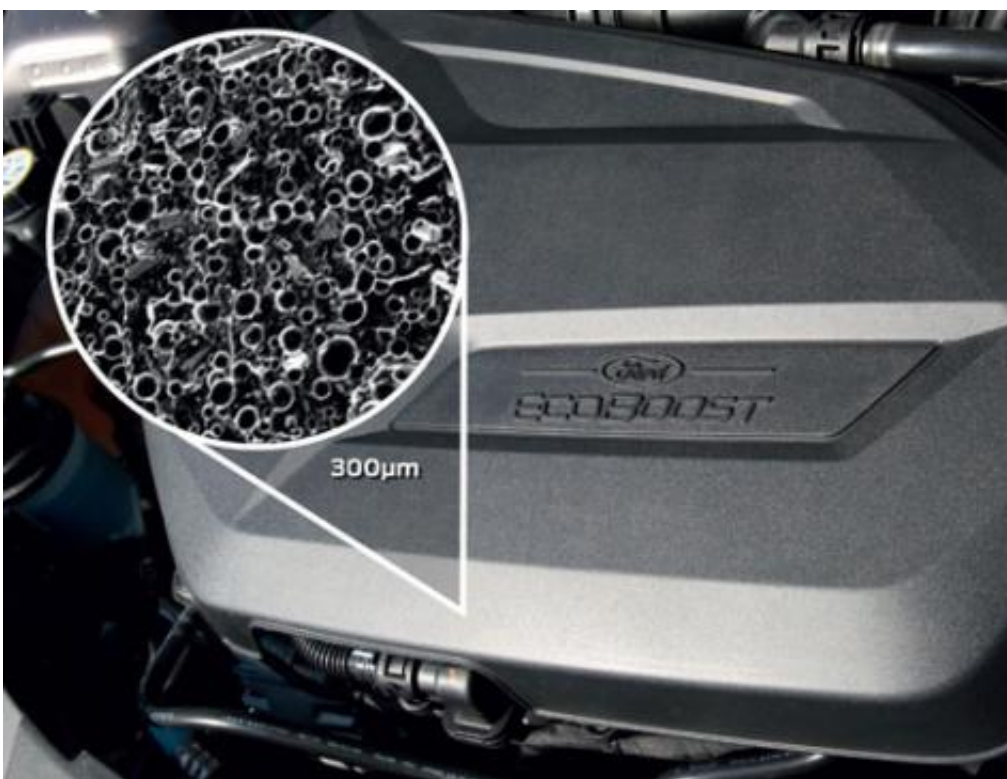


Ford's new chocolate-inspired plastic, made with air bubbles

April 8 2011, by Katie Gatto



(PhysOrg.com) -- Plastic is often used in vehicles, when the designs demand a lower weight on the vehicle, in order to increase vehicle speed or fuel efficiency. Current plastics only meet those goals to a limited degree. While plastic is lighter than metal, it is not as light as some designers would like. That is why car companies are working on lighter

plastics, by making them with very small holes.

Ford has been working on these new and lighter [plastics](#), but they got their inspiration from a very unusual place, chocolate. From the Aero chocolate bar to be specific. The Aero chocolate bar is known for having [gas bubbles](#) in the bar. In chocolate this creates a different texture and mouth feel.

This same theory was applied to the plastic in some of Fords new plastic pieces. The integration of gas bubbles into the plastic has made a lighter plastic. The bubbles create a microscopic [honeycomb structure](#) in the plastic, thereby reducing the amount of weight that the plastic takes up, without compromising the integrity of the piece. The plastic is 20 per cent lighter without increasing cost or reducing strength.



The new plastic, which has been named MuCell by the company, also has a less laborious process for manufacturing, it requires lower pressures in order to mold the plastic, which means that this process requires less energy to produce the parts. The process also produces more parts with the same amount of source material, reducing waste. The plant can produce roughly 33 percent more parts per hour, when it is compared to the conventional parts [manufacturing process](#).

According to sources at Ford, the MuCell technology is expected to be seen in vehicles like the Ford Focus and Galaxy in the next few years, though no specifics have been released at this time.

More information: [Ford](#)

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