

## **Recycling mixed polymer waste and automotive residue**

Warwick Manufacturing Group, the United Kingdom, has developed and patented a dual thermoplastic injection sandwich moulding technique that uses plastic recyclate or automotive shredder residue as a core filler and virgin plastic as the skin. In this process, two injection barrels are employed to feed waste, through a single nozzle, into the tool; skin plastic is injected first, followed by the core polymer, which has the effect of blowing the skin plastic around the tool. The resultant sandwich component enables a coloured engineering polymer to encapsulate the recyclate or shredder residue, thus masking various unpleasant properties and enhancing its surface appearance. Also, the engineering plastic forms the skin offering predictable mechanical and physical properties to the component.

The feedstock for this process can be obtained from either selected segregated post-consumer waste polymers or relatively clean post-production polymer waste or mixed plastic waste and shredder residue. The use of such materials will reduce the pressure on landfill sites by recycling them into quality engineering products. *Contact: Dr. G.F. Smith or Ms. Vanessa Goodship, Recycling Centre, Advanced Technology Centre, The Warwick Manufacturing Group, University of Warwick, the United Kingdom. Tel: +44 (24) 7652 3784; Fax: +44 (24) 7652 3387.*

*Website: <http://www.warwick.ac.uk/atc/materials/tpasrrecyc/Recyc1.html>*