Altair

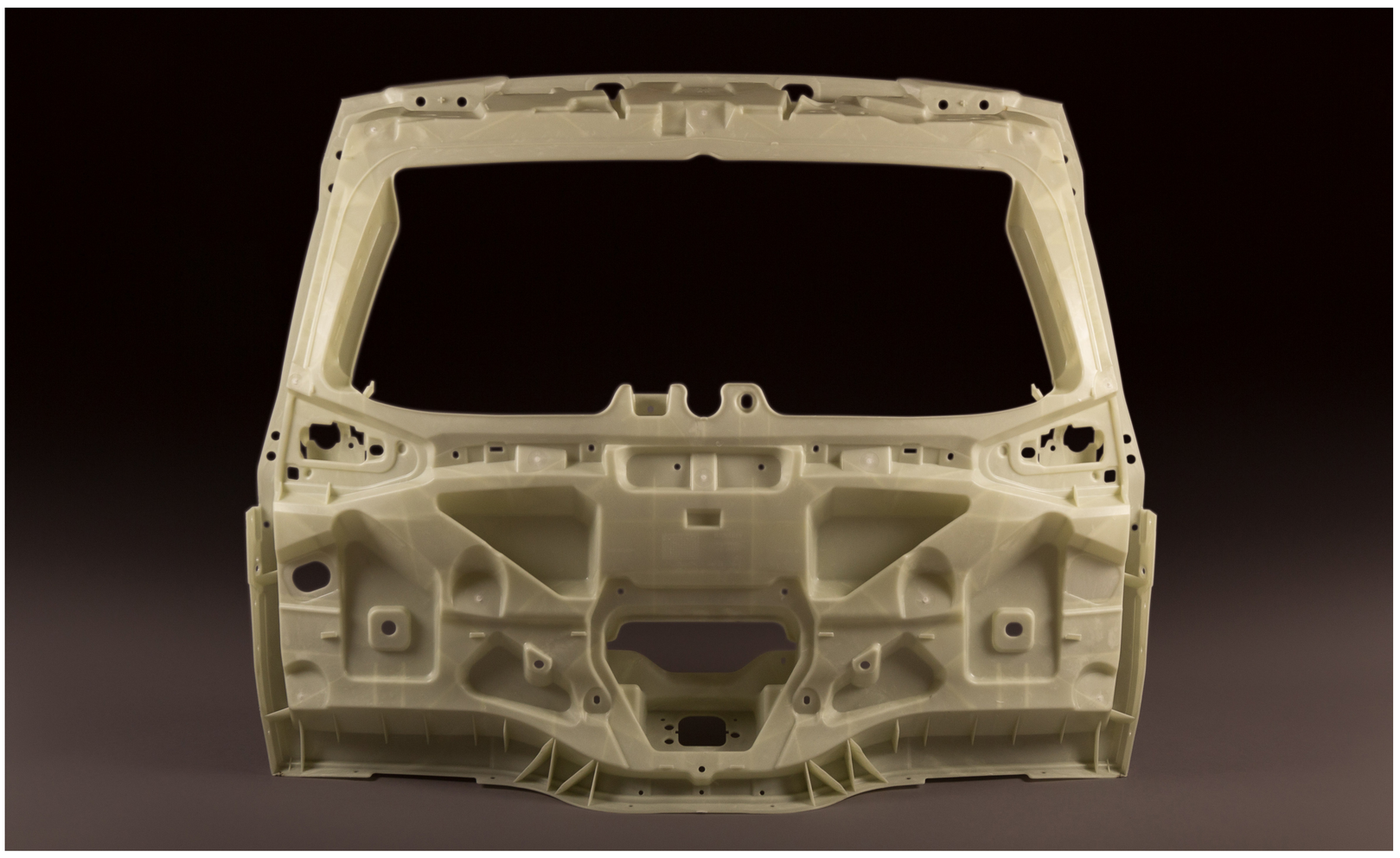
enlighten award

Trinseo LLC

Renault Espace Lift Gate

In a joint development project, Renault and Trinseo developed a full thermoplastic lift-gate solution, which has been commercialized and implemented on the serial production of the 2015 Renault Espace. Replacing metal by plastics brings several advantages. Thermoplastics offer more design freedom and reduce upfront investments. In addition to easier recycling of this all-polymer lift-gate, it brings a 10% weight savings over a metal version. The latter contributes positively to lower fuel consumption and emissions, which 'drives' the automotive market towards a more sustainable future.

- The weight savings of 10% is achieved through a combination of factors, starting with the selection of the optimal combination of LGF-PP and TPO compounds.
- To optimally utilize the material properties, in order to achieve all necessary performance attributes, while minimizing its weight and cost, the lift-gate design was engineered with the thermoplastic material selection in mind.
- Following from that, the design of the molding tooling gate location and geometry as well as the cooling system layout, ensured achievement of the necessary molding productivity and part quality in terms by preventing any warpage of the lift-gate.



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