

Safety



Expansion Slots in Passenger-Airbag Cover

OEM/Vehicle

2010MY Ford Motor Co.: Ford® Mustang® Sports Car

System Supplier

Takata

Material Processor

Northern Engraving

Material Supplier

Dow Automotive

Resin

Pulse® 2000EZ PC/ABS



Design changes to the surface of the passenger-airbag (PAB) door eliminated the cross-car crown on the door and necessitated design changes in the door substrate. To prevent warpage during elevated temperatures, CAE was used to evaluate a number of potential design changes to the aluminum-wrapped PC/ABS door. Expansion slots in the PC/ABS substrate proved to be the right solution to accommodate CTE differentials between the substrate, appliqué, and TPE/TPO IP base. This design eliminated the warpage issue ensuring proper airbag deployments, enabling the plastic door to be kept (rather than necessitating change to a full aluminum one) while minimizing mass and saving significant cost.