ENGAGE™ polyolefin elastomers have long been the impact modifiers of choice in TPO applications. Today, Dow advances in performance and processability enable production of best-in-class TPOs for interior and exterior molded parts that meet demands for:
- improved aesthetics
- better impact toughness balance
- higher flow systems
- thin walling and density reduction

For example, ENGAGE 8842 POE is an ultra-low density ethylene octene copolymer offering exceptional properties with the added potential of handling in pellet form. ENGAGE 8842 has excellent flow characteristics and provides superb impact properties when blended with polypropylene. And it performs well where low temperature properties are desired.

Likewise, ENGAGE 8137 POE offers outstanding flow properties and impact performance while meeting today’s increasing demand for greater part complexity with thinner wall sections.

Similarly, ENGAGE XLT POEs enable production of lighter, thinner TPO parts with increased stiffness, better impact strength and improved aesthetics for demanding interior instrument panel and airbag applications. In addition, it exhibits superior paint adhesion, passing OEM-required hot water jet tests, often a challenge for TPOs based on conventional impact modifiers.

Plus, Dow simplifies sourcing by providing a comprehensive portfolio of POEs for all your production needs.

ENGAGE™ polyolefin elastomers

- **High Melt Strength** = More Thermoforming Possibilities
- **Elastomers in Injection Molding** = Durability & Impact Performance
- **TPO Ease of Processing** = Expanded Applications
- **Polyolefin Elastomers** = Enhanced Paintability & Better Aesthetics
- **Sustainability Benefits** = Reduced Scrap, Recyclability, Lighter Weight Parts

Exterior Applications
- Rear bumper fascia
- Side molding
- Front end body panels
- Front bumper fascia

Interior Applications
- Soft TPOs for simulated leather on door panels and consoles
- Hard TPOs for instrument panel components and soft-touch controls
- Soft TPOs for driver-side airbag covers
- Hard TPOs for knee bolsters
- Hard and soft TPOs for roof pillar moldings

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Formulation advances create design enhancements
Dow advances in elastomer technologies have broadened the possibilities for use of POEs in hard and soft TPO applications. For example, in thermoforming applications, Dow has developed several grades of ENGAGE™ POEs that exhibit high melt strength. This translates to parts that remain pliant during processing, yet retain shape stability, minimizing sag during preheating. These advances result in parts with high levels of surface quality, consistency, color stability and the ability to more quickly remove parts from molds – thus increasing productivity.

### Summary of Elastomer Design Effects on TPO Performance

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### Six reasons to make ENGAGE™ your material of choice

- Compound modifiers that provide excellent impact resistance, stiffness, and flow balance properties
- Improved aesthetics in end products
- Easy mixing, forming, and processing with industry standard equipment in TPO manufacturing
- Reproducible performance for better fit and finish
- Variety of grades that can be used to optimize dispersion and molding flow
- High melt strength grades for thermoforming applications

### Simplified sourcing
Dow simplifies sourcing by providing POEs for all your production needs. With our global supply chain, you can rely on us to deliver materials where you need them, when you need them – with a variety of packaging options suitable for your operation.

Dow’s broad portfolio of polyolefin solutions offers a wide variety of possibilities for the development of automotive TPOs that deliver components combining excellent performance with ease of processing, improved productivity, better aesthetics and sustainability.

Let us show you how ENGAGE can be applied to your process. Learn more at [www.dowelastomers.com](http://www.dowelastomers.com)

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