ExxonMobil
Signature Polymers

Factsheet

Exceed™ Tough

Extraordinarily tough automotive parts

Challenge reality and rethink what's possible in automotive performance.

Step-out toughness/ stiffness balance

Opportunity to lightweight

35% higher impact

Up to 50% less plastomer use

With higher impact than standard impact copolymers (ICP), Exceed™ Tough polypropylene (PP) enables tougher, lighter vehicle components that are durable and safe.

Create new vehicle designs

Through collaboration, Exceed Tough PP enables customers to **create new vehicle** designs with improved performance – that **do more with less.**

It increases the opportunity to use PP in vehicle designs, ultimately leading to lighter weight parts that can improve efficiency in conventional cars and 'new energy vehicles' (NEVs).

Exceed Tough PP can be used neat or in compounds for vehicle components such as:

- **Interior parts** - instrument panels, door panel trim, and pillar trim
- **Exterior body parts** - bumper fascia and wheel well liners

Exceed Tough PP provides a step-out toughness and stiffness balance with exceptional cold temperature properties. It offers 35% higher impact and 20% improved toughness (low temperature ductility) than standard ICP.

Plastomer loading can be reduced by 50%, to simplify formulations and provide significant cost saving opportunities.

With **multi-region supply** of consistent quality materials that can meet specifications globally, Exceed Tough PP can help optimize qualification time and cost.

Figure 1:

Selected property data for Exceed™ Tough PP8285E1 and the reference.

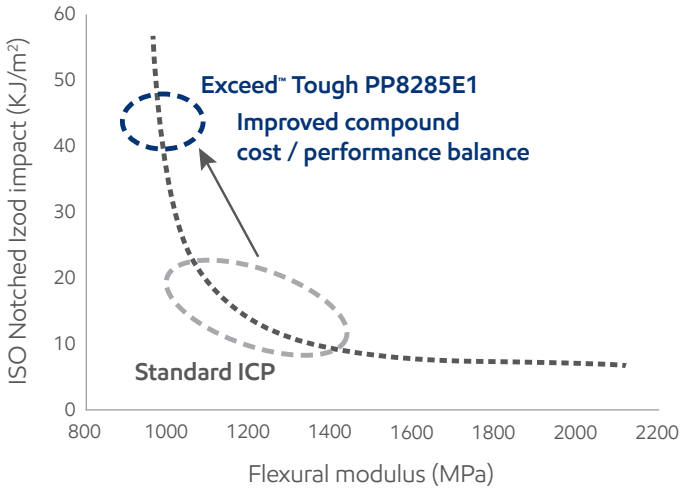
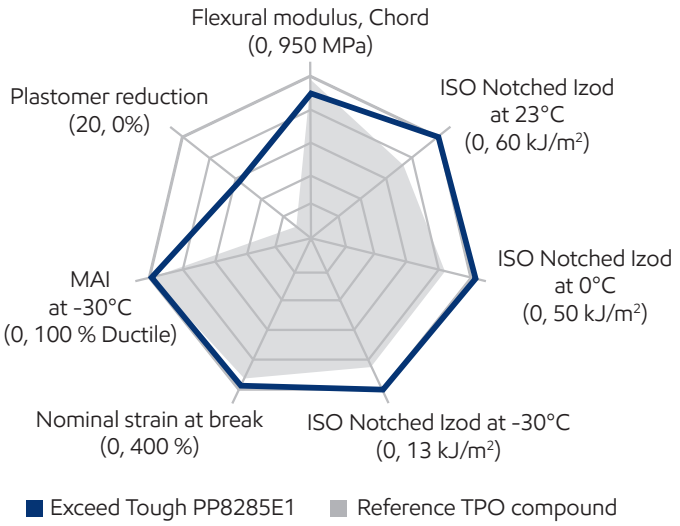


Figure 2:

Selected property data for compounds with Exceed Tough PP8285E1 and the standard ICP reference. Plastomer loading reduced from 20% in the reference TPO compound to 10% in the Exceed Tough PP8285E1 compound.



Grade	MFR (230°C/2.16 kg) g/10 min	Tensile stress at yield MPa	Flexural modulus 1% secant (2.0 mm/min) – MPa	Flexural modulus 1% secant (0.051 in/min) – psi	Notched Izod impact (23°C) – J/m	Notched Izod impact (23°C) kJ/m²	Notched Izod impact (-20°C) kJ/m²	Heat distortion temperature (0.45 MPa) °C
Exceed Tough PP8285E1	30	19.9	1020	144000	No break	46	6.8	82.8
	ASTM D1238	ISO 527-2	ISO 178	ASTM D790A	ASTM D256A	ISO 180/1A	ISO 180/1A	ISO 75-2/B

Values given are typical and should not be interpreted as specifications. Data generated by or on behalf of ExxonMobil Chemical.
Test methods are based on the ASTM and/or ISO standards.

Use Exceed Tough PP to challenge reality in automotive performance.

What's new: ExxonMobil Signature Polymers

All our polymers are now positioned under a single portfolio brand: Signature Polymers. The aim is to simplify our product architecture and naming to improve portfolio navigation for you. We would like to stress that our commitment to high quality products remains the same, it is the names that change. Everything else remains the same. We will be making these modifications over the next six months so you will see both old and new grade names highlighted during that time. Here's a quick overview of brands and grade names that have changed in this document:

Legacy Commercial Name	New Commercial Name
Achieve™ Advanced PP8285E1	Exceed™ Tough PP8285E1

Want to see what's changed in our portfolio? Go to **exxonmobilchemical.com/sptransform**

Contact us for more information: **exxonmobilchemical.com/pp**

ExxonMobil Signature Polymers

Bring your impossible

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