



Enable™

A sensible solution for high-performance thin-gauge hand wrap with the potential to incorporate high loading levels of Post Consumer Recycled (PCR) content.

Potential benefits:



High tenacity content



Downgauging opportunity



Consistent extrusion



Enables incorporation of recycled content

Stretch film is used for pallet wrapping and load bundling to help protect products from dust, moisture, pilferage, and shifting during transportation and storage, while not obscuring product visibility. High-performance stretch wrap can help to significantly reduce the risk of damage to the contents in transit.

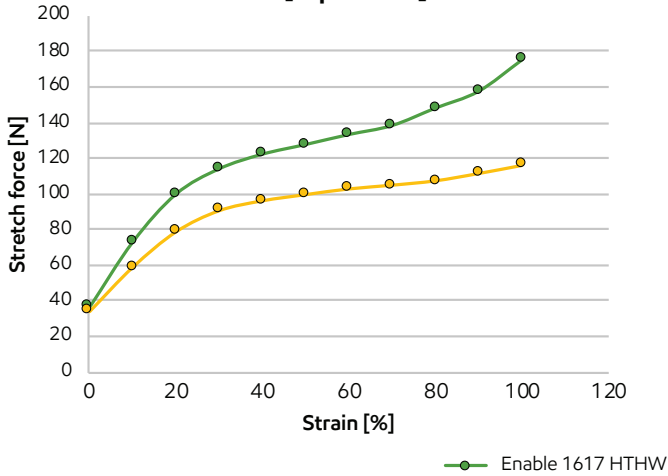
An Enable[®] performance polyethylene resin (PE)-based solution can help to deliver high tenacity, can contribute to high holding force and great load stability.

The new Enable 1617 performance PE resin combines seemingly opposite features: high flow and high tenacity. This unique combination can result in great cast film processing, exhibited by fast line speed, low pressure and low motor load when compared to incumbent high-tenacity grades. With its flow properties, Enable 1617 resins can be run in coextruded structures as discrete layers, contrary to some of the lower MI high tenacity resins that required blending in order to be processed. The balanced properties provide opportunities for stiff, thinner gauge film, while experiencing consistent extrusion and high rates, up to 650 m/min for 8 µm film thickness.

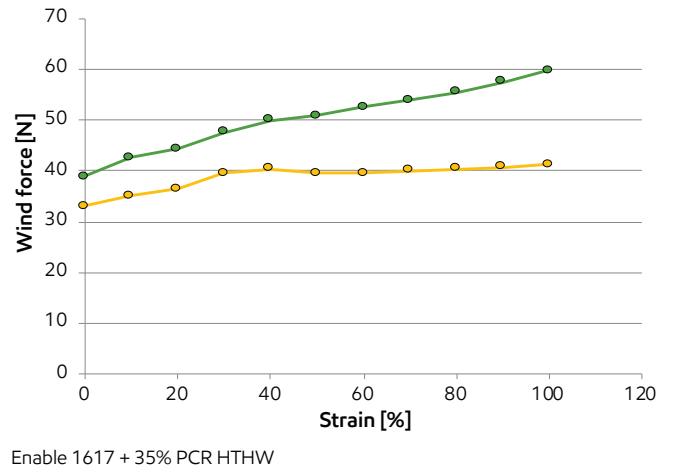
As part of our desire to help the value chain achieve their reduced use of raw material goals, ExxonMobil has been developing solutions for downgauged, tougher hand wrap films that can include PCR content.

In high-tenacity hand wrap applications, Enable 1617 resin can make the incorporation of 30+% PCR content possible, while maintaining high processability and good film quality. While PCR content can be challenging to predict regarding gel content and quality consistency, Enable 1617 resin is especially well-suited as a blend partner with PCR content. The high melt strength can contribute to process stability, while the high flow attributes, compared to other high-tenacity polymers, makes the process of thin gauge film at high extrusion rates possible. Film properties can be affected to some degree by the quality of PCR content, however Enable 1617 resins are instrumental in helping to maintain acceptable film properties for the application without need to up-gauge.

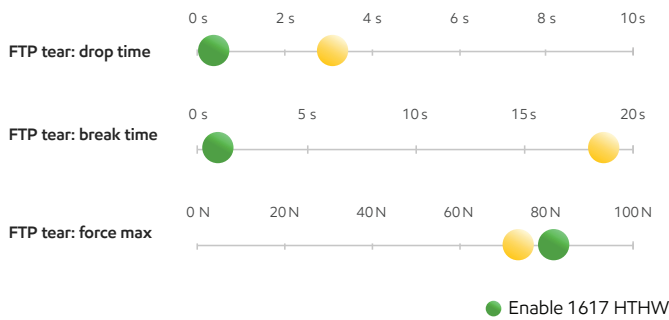
FPT Ultimate Tensile Curves
[8 µm film]



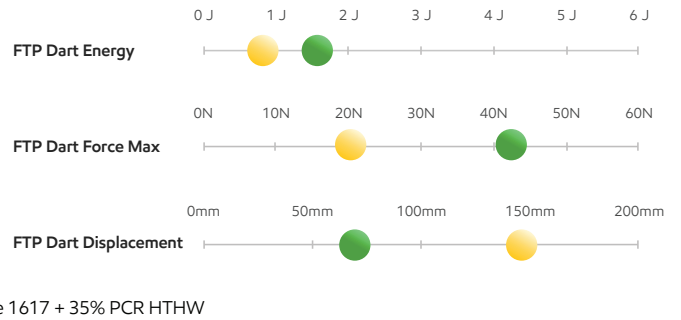
FPT Ultimate Wind force
[8 µm HT hand wrap film]



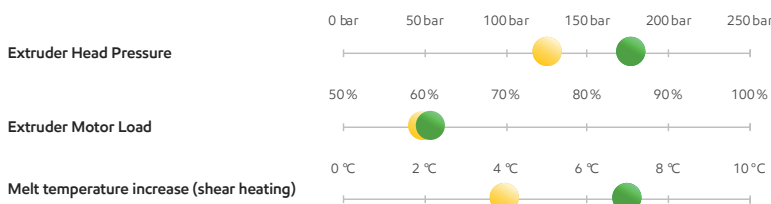
FTP Tear propagation resistance at 50% strain:



FTP Puncture (Dart) at 50% strain:



Processing data for 8 µm-thick film made at 605 m/min



Processing in December 20, 2023 at Colines, on Colines AllRollEx 1500, 7-extruders with ABCDCBE layer configuration

Test item	Test method	Stretch force	Unit
Test FPT-EVO at ExxonMobil	Ultimate stretch test: Unwind force: 30N, Wind strain -4%, Line Velocity: 1000 mm/s, W stretch pattern	Stretch force	N
		Strain	%
	Tear Propagation Resistance test: Unwind force: 30N, Wind strain 0%, Line Velocity: 1000 mm/s, pre-stretch 50%, W stretch pattern	Time	s
		Max force	N
		FPT-dart Energy	J
	FPT Puncture (Dart): Unwind force: 30N, Wind strain 0%, Line Velocity: 1000 mm/s, puncture speed 500 mm/s, pre-stretch 50%, W stretch pattern	FPT-dart force	N
		FPT-dart displacement	mm

Contact us for more information: [exxonmobilchemical.com/pe](https://www.exxonmobilchemical.com/pe)

ExxonMobil
Signature Polymers

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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. The composition of the products are unchanged, it is only the names that updated. We will be making these modifications over the next few months, through mid 2025, 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 will be changed in this document:

Legacy Commercial Name	New Commercial Name
Enable™ 1617	Exceed™ Flow m 1716

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