



Cost efficiency

- Replaces BOPA for lamination to optimize costs
- Easy to handle due to no moisture pick-up



Abuse resistance

- Superior film toughness
- Can pass stringent drop tests*
- Packaging integrity and reduced waste

Material substitution in a liquid packaging SUP

In collaboration with converters and partners in southern China, INNATE™ TF Polyethylene Resins for Tenter Frame Biaxial Orientation are moving toward commercial application as a material substitution in liquid detergent and edible oil packaging.

The traditional liquid detergent pouch uses PET and BOPA packaging materials. The new TF-BOPE film made with INNATE™ TF resin will replace BOPA as the interlayers of the packaging, reducing the packaging material used, and strengthening the mechanical performance of the packaging bags. Additionally, replacing BOPA may reduce costs.

INNATE™ TF Polyethylene Resins for Tenter Frame Biaxial Orientation (1.7g/10 min MI; 0.926 g/cm³ density) feature a unique molecular architecture that offers a wealth of features and benefits, including recyclability.



We call INNATE™ TF resins The Future of sustainable packaging. Why? Compared to traditional PE products, films made with INNATE™ TF resins:

- Achieve up to 80% less haze
- Have 2x the impact strength and tensile modulus
- Offer 3x the puncture resistance and tensile strength
- Allow dazzling optics for printing
- Are low-temperature resistant

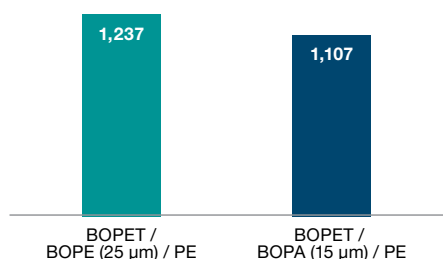
Let's talk about the future of your applications with INNATE™ TF resins.

*Packaging test

Test item	New structure
Single bag drop (1.5m)	PASS
Compressive test (150kg, 1 min)	PASS
Whole box drop (1m) (6 pack x 1L, room temp)	PASS
Whole box drop (1m) (6 pack x 1L, 0°C)	PASS

High impact resistance

Dart impact (A)(g)



Structure

BOPET	BOPET
BOPA (15μm)	TF-BOPE (25μm)
PE film (70~130μm)	PE film (60~120μm)

Innate TF
polyethylene resins for tenter frame
biaxial orientation by

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