Recyclability
- All-PE structure with excellent packaging performance

Appearance
- Excellent gloss, transparency and haptics
- Matte surface option available
- Printability
- Touch and feel close to incumbent PET lamination structure

Abuse resistance
- Superior film toughness
- Can pass stringent drop tests
- Packaging integrity and reduce waste

Packaging efficiency
- Fast packing speed on pouch making lines

Collaborating on a recyclable, **all-PE SUP for dry foods & liquids**

The Stand-Up-Pouch (SUP) market has consistently grown, with more complex structures developed over the years. Now, many are desiring to incorporate mono-material packaging for recyclability. But how to maintain the higher performance?

Collaboration made it happen. Working with Asian converters and bag making machinery manufacturers, and using INNATE™ TF Polyethylene Resins, a recyclable, all-PE structure SUP was realized. And it passed the tests. The structure demonstrated excellent stiffness and toughness, excellent appearance, strong seals, and fast pouch making – up to 120 packs per minute.

Applications for the SUP include dry food, pet food, other granule-type content, as well as liquids.

INNATE™ TF Polyethylene Resins for Tenter Frame Biaxial Orientation (1.7g/10 min MI; 0.926 g/cm^3 density) feature a unique molecular architecture that offers a wealth of features and benefits, including recyclability.

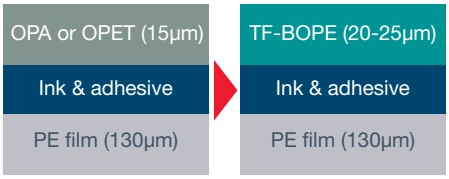
Polyethylene films created using INNATE™ TF resins demonstrate outstanding physical properties. Compared to traditional PE products, films made with INNATE™ TF polyethylene resins can achieve up to 80% less haze, twice the impact strength and tensile modulus, and three times the puncture resistance and tensile strength. Add in dazzling optics for printing and low-temperature resistance, and it's easy to see why we think INNATE™ TF resin is **T**he **F**uture of sustainable packaging.

TF-BOPE laminated solution

Test item	Test result
Gelbo flex (cycles before pin hole appears)[1]	13,500
Gloss %[1]	95
Haze %[1]	1.8
Dart drop impact A (g)	676
Puncture force (N)	114
Pouch making efficiency	120 packs/min (1L SUP)
Single bag drop (2m on 6 sides)	PASS

[1] TF-BOPE (25 µm) film

Structure



Innate TF
polyethylene resins for tenter frame biaxial orientation by DOW

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North America	+ 800-258-2436	**Europe, Africa**	+ 00800-369-4636-7	**dow.com**
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