



Versatility, Value & Opportunity

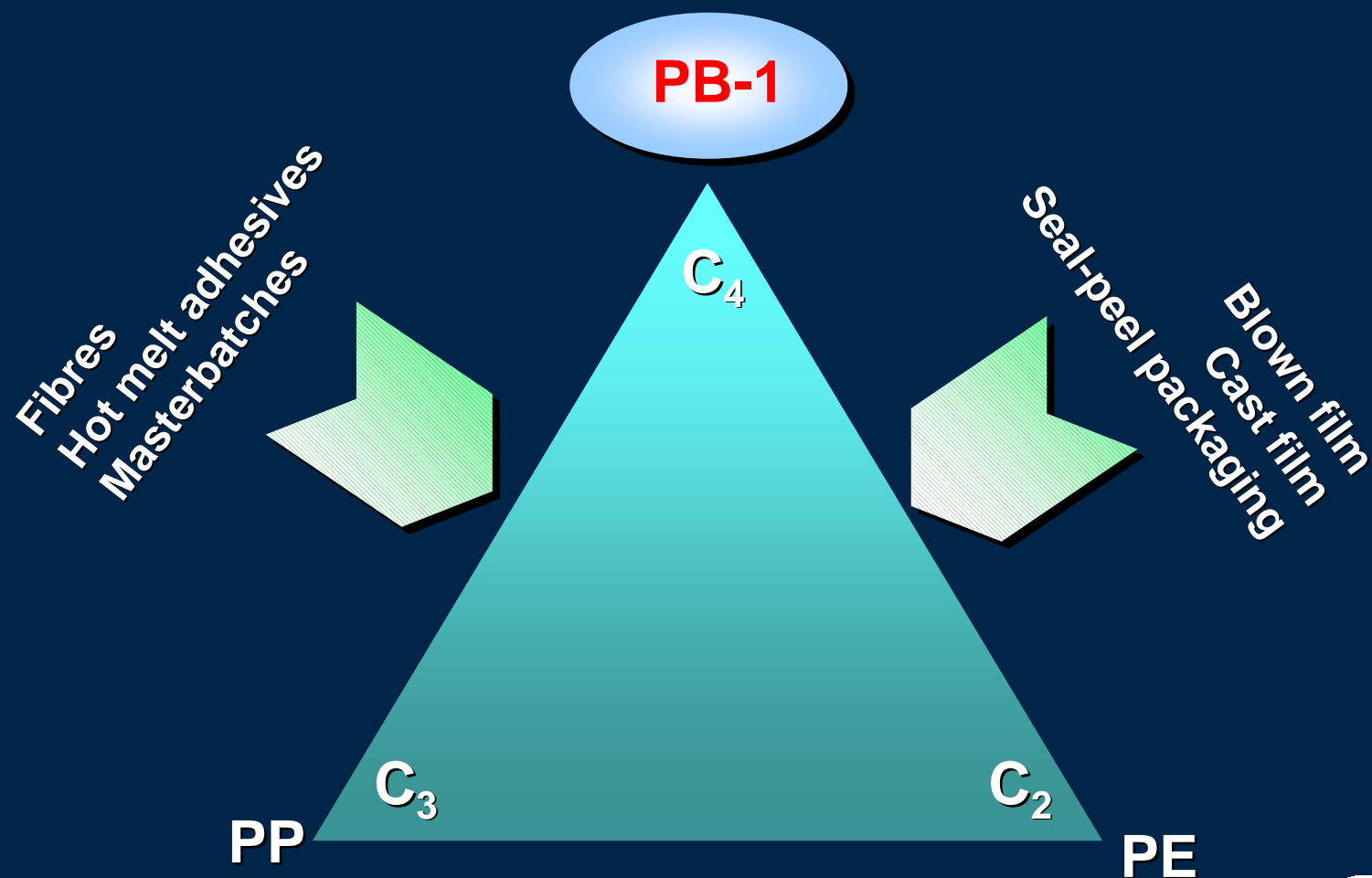
Polybutene-1

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Polybutene-1

Basell Unlocks the Value in C₄ Chemistry



A Versatile Material With Untapped Potential



Fibre modification & hot-melt adhesives



Pipe *



Easy-open packaging



Masterbatches

PB-1 Makes Flexible Packaging “Easy Open”

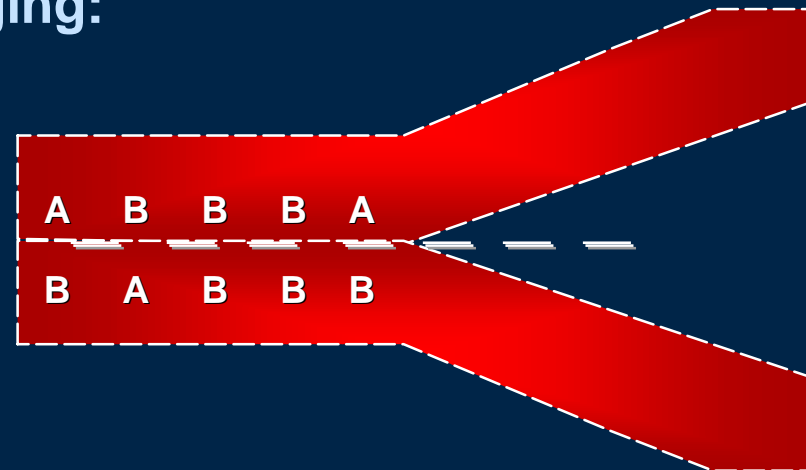
Exploits the incompatibility between PB-1 and PE for easy open seal-peel packaging:

25% PB (A) + 75% LDPE (B)

A-A Strong (weld)

B-B Strong (weld)

A-B Weak (peel)



Benefits

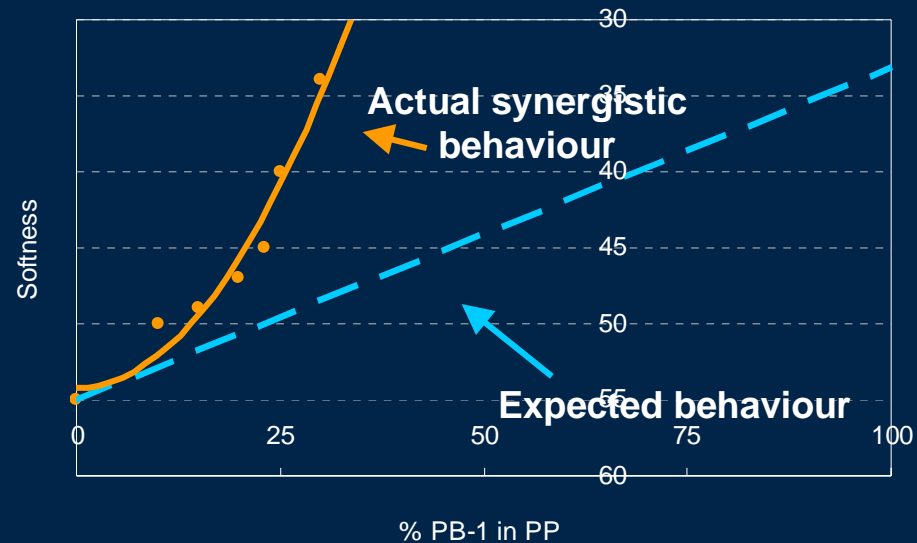
- Tailored peel strength
- Consistent peel force
- Broad sealing window
- Reliable quality and integrity

PB-1 Makes Softer Film and Fibre

Exploits:

- Miscibility with PP
- High elasticity
- Creep resistance

A little PB -1 goes a long way to soften PP



Benefits:

- Softness
- Elasticity
- Flexibility

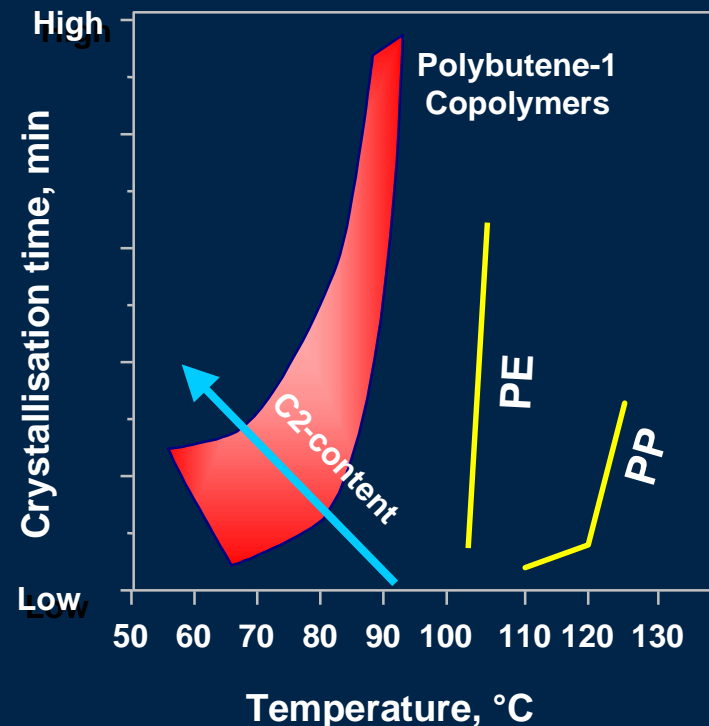
PB-1 Enhances Performance of Hot-Melt Adhesives

Exploits PB-1's unique crystallisation behavior:

- Good high and low temperature capability
- Processable at low temperatures
- Compatibility with tackifiers, waxes, and other resins
- Good thermal stability

Benefits:

- Long open times
- High cohesive and adhesive strength
- Non-corrosive for extended pot life
- Environmental & chemical resistance



PB-1 Offers Compounders New Opportunities to Tailor Product Performance ⁷

Exploits PB-1's unique rheology:

- Highly shear-thinning compared to PP & PE

Benefits:

- Improved pigment dispersion
- Up to 20% higher extruder throughput rates
- Improved ESCR in HDPE
- Accepts high levels of filler up to 80%



In Conclusion...

Polybutene-1 is an Advanced Polyolefin material with unique...

- **Creep resistance**
- **Miscibility with other polymers**
- **Rheological characteristics**
- **Crystallisation behaviour**

...and offers complementary properties to polypropylene and polyethylene, thus further expanding the addressable market for polyolefins