Building Leadership Excellence

people resources solutions

OMNOVA SOLUTIONS

Presents

Continuing to Deliver Binder Efficiency in a Changing Market

May 1-4

PaperCon 2011

Northern Kentucky Convention Center

RETHINK PAPER:
Lean and Green

Delivering Solutions in a World of Change

Customer Needs

Similar Needs
- Good Print and Strength Performance
- Improved Cost Efficiency

Market and Supply Chain Dynamics

World of Change!
- Supplier Base
- Raw Materials

(Availability, Cost Structure)
- Technology (Pigments, Binders)

OMNOVA SOLUTIONS

Continuing to Deliver Improved Binder Efficiency in a World of Change!

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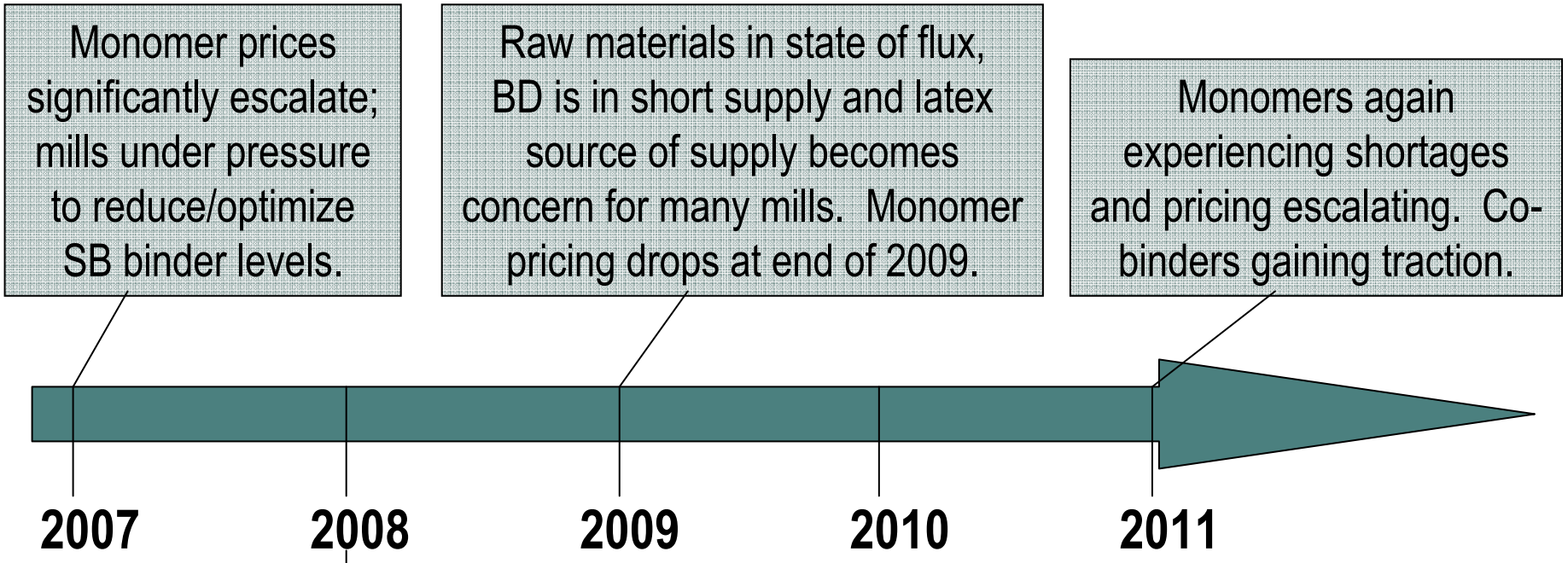
5 Years – Paper Formulation Pressures



SYNTHETIC BINDER TECHNOLOGY MUST EVOLVE TO KEEP PACE WITH PIGMENT AND NATURAL BINDER DEVELOPMENT.

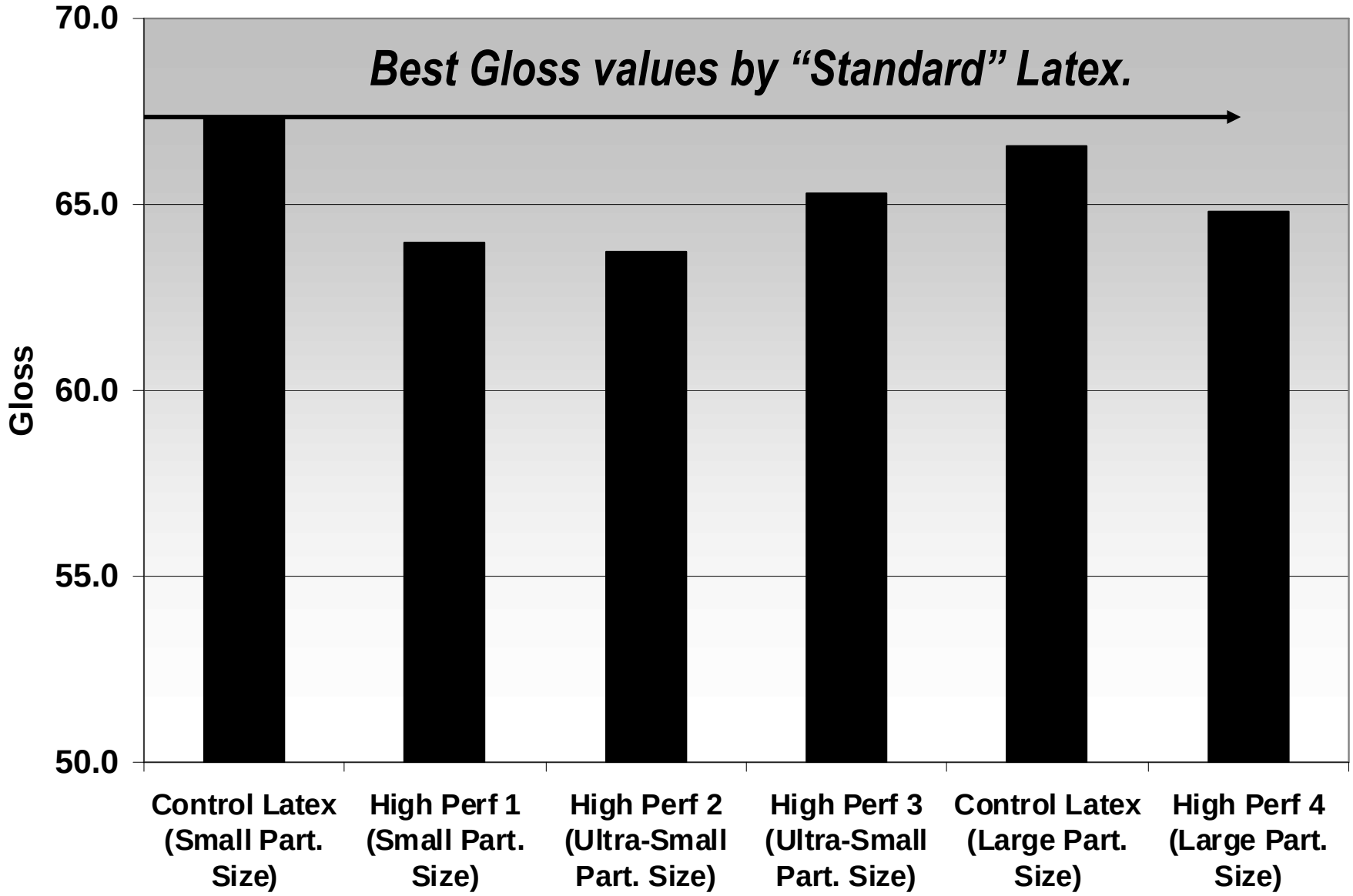
Latex Strength Performance

- Typical latex “levers” to influence strength performance
  - Tg
  - Particle Size
  - % Gel
  - Functional Monomer Package
  - Carboxylation Level
  - Molecular Weight
  - Crosslink Density

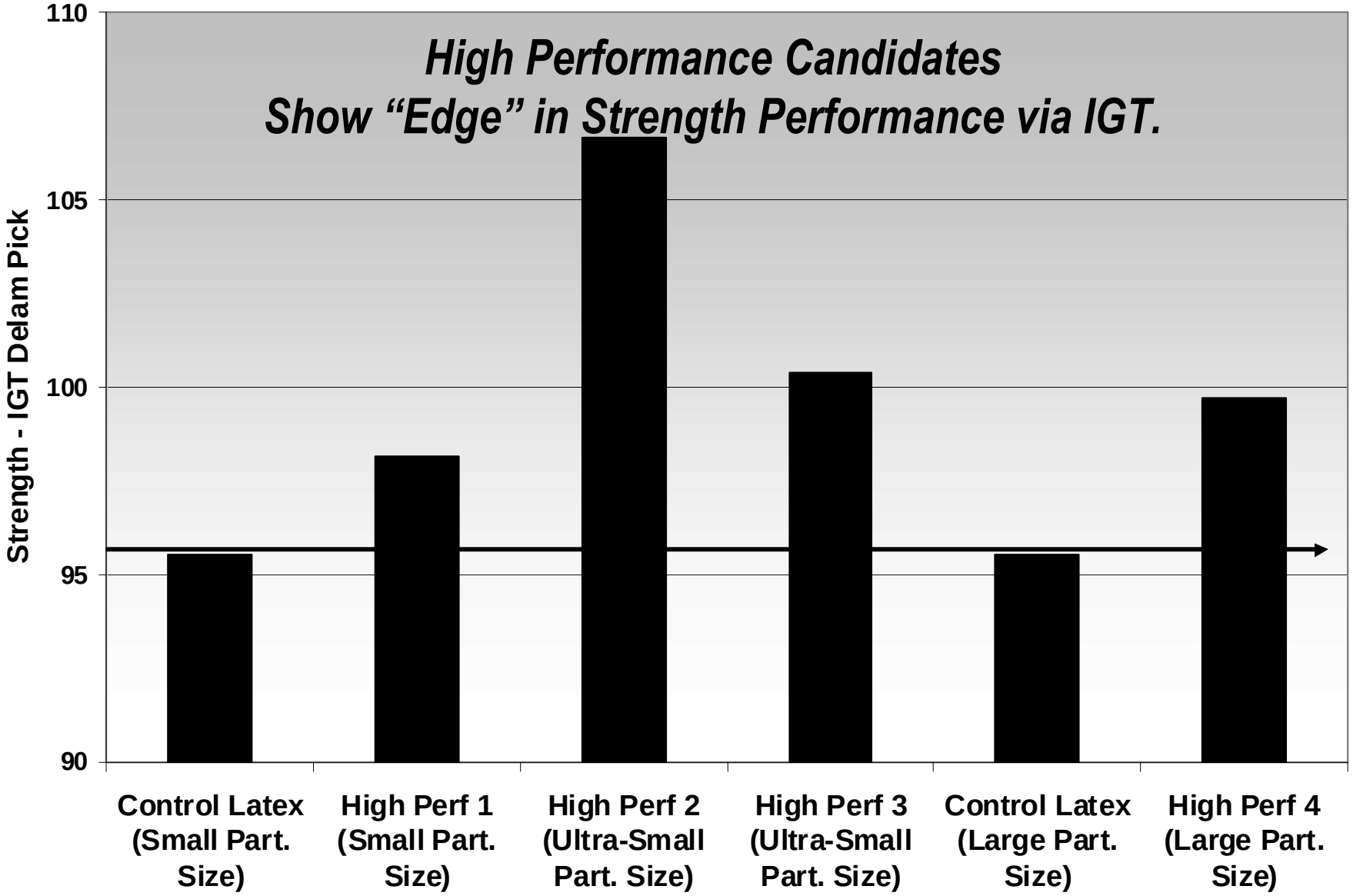
Generic Freesheet Case Study Using C*Film

- Pigment Package: Approximately 75 pts Calcium Carbonate, 25 pts Clay pigment system
- Latex evaluated at 10 pt level
  - Latex Tg values in range of -2 deg C to +14 deg C
  - Latex Particle size range of <1000 A to >1800 A
- Cobinder: C*Film at 3 pt level

Generic Freesheet Case Study Using C*Film

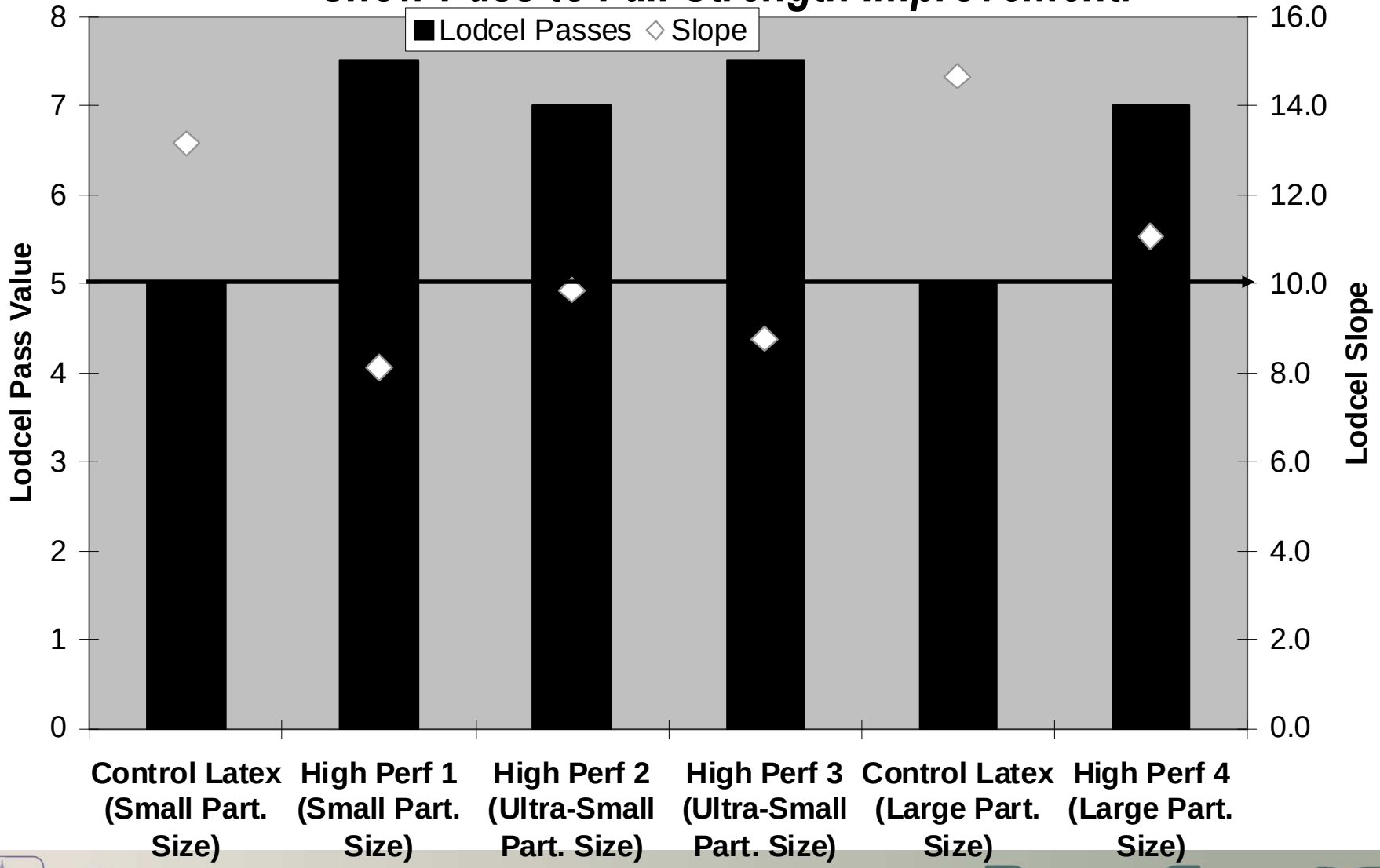


Strength – IGT Delam Pick

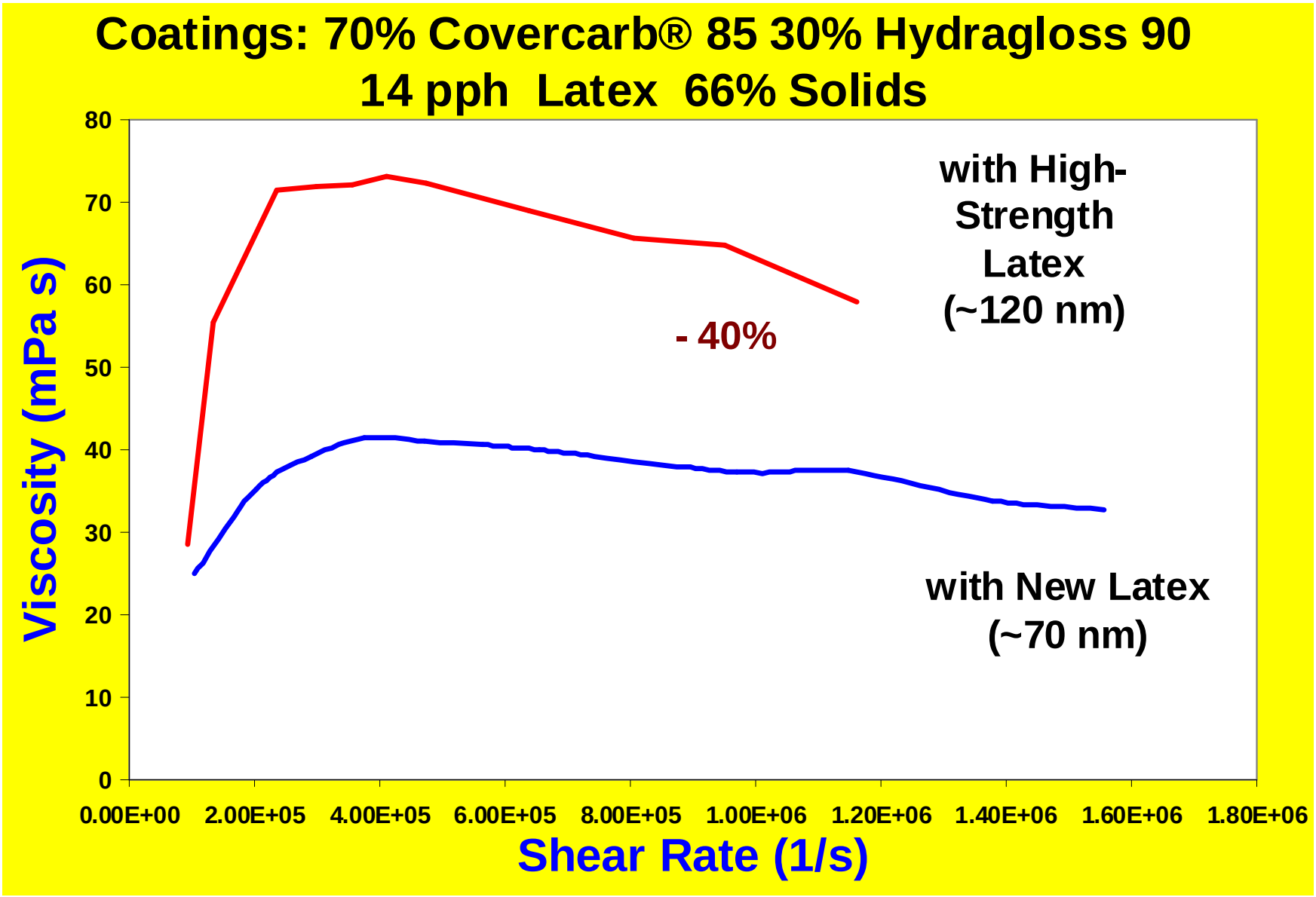


Strength – Lodcel Pass to Fail

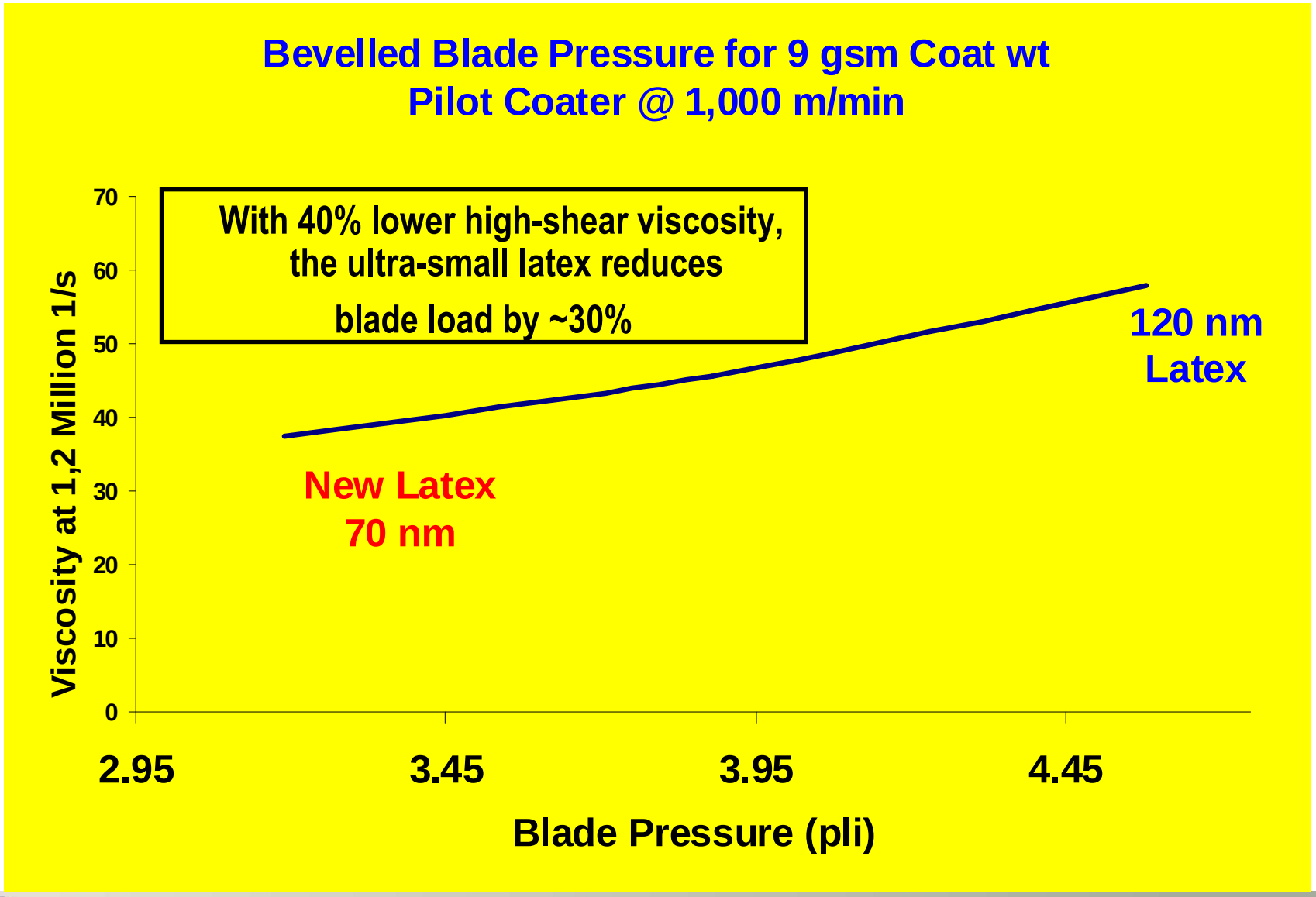
High Performance Candidates Show Pass to Fail Strength Improvement.



Coating Rheology Advantage

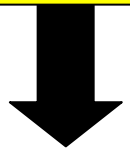


Runnability and Blade Pressure



Continuing to Drive Latex Performance

- ***Designed Polymer Microstructure (Blockiness, Randomness)***
- ***Controlled Molecular Weight Distribution***
- ***Chain Length Between Crosslinks***



Delivers Latexes capable of providing:

- ✓ *Superior control of Ink Setting*
- ✓ *High IGT Strength*
- ✓ *Uniform Prints*

Over a broad particle size range….