

New generation SYMBIEX™ adhesive for flexible packaging

Presented By:

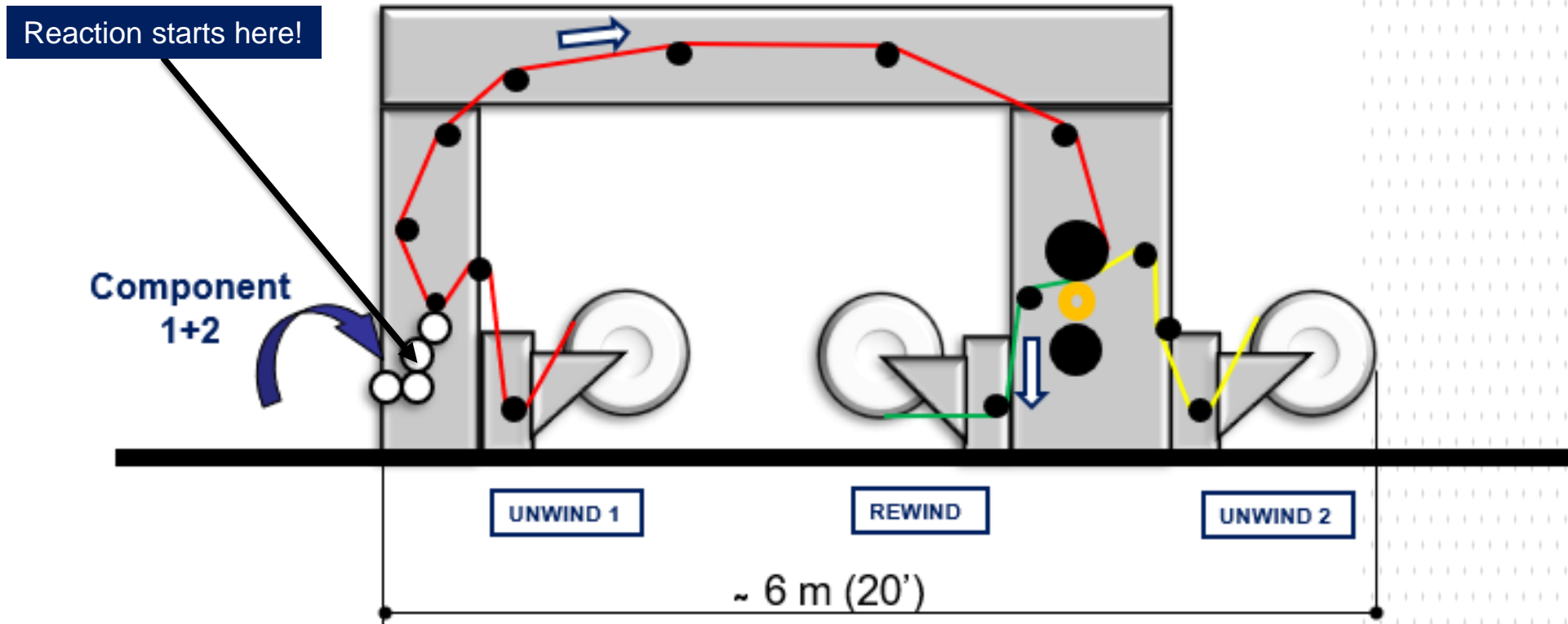
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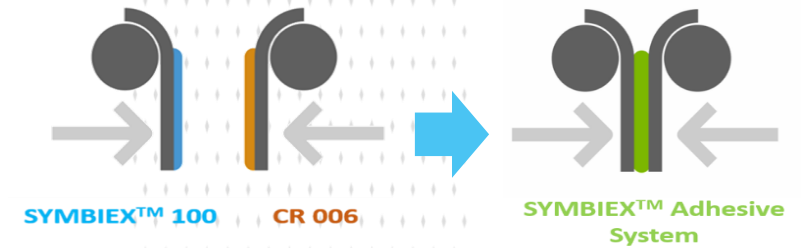
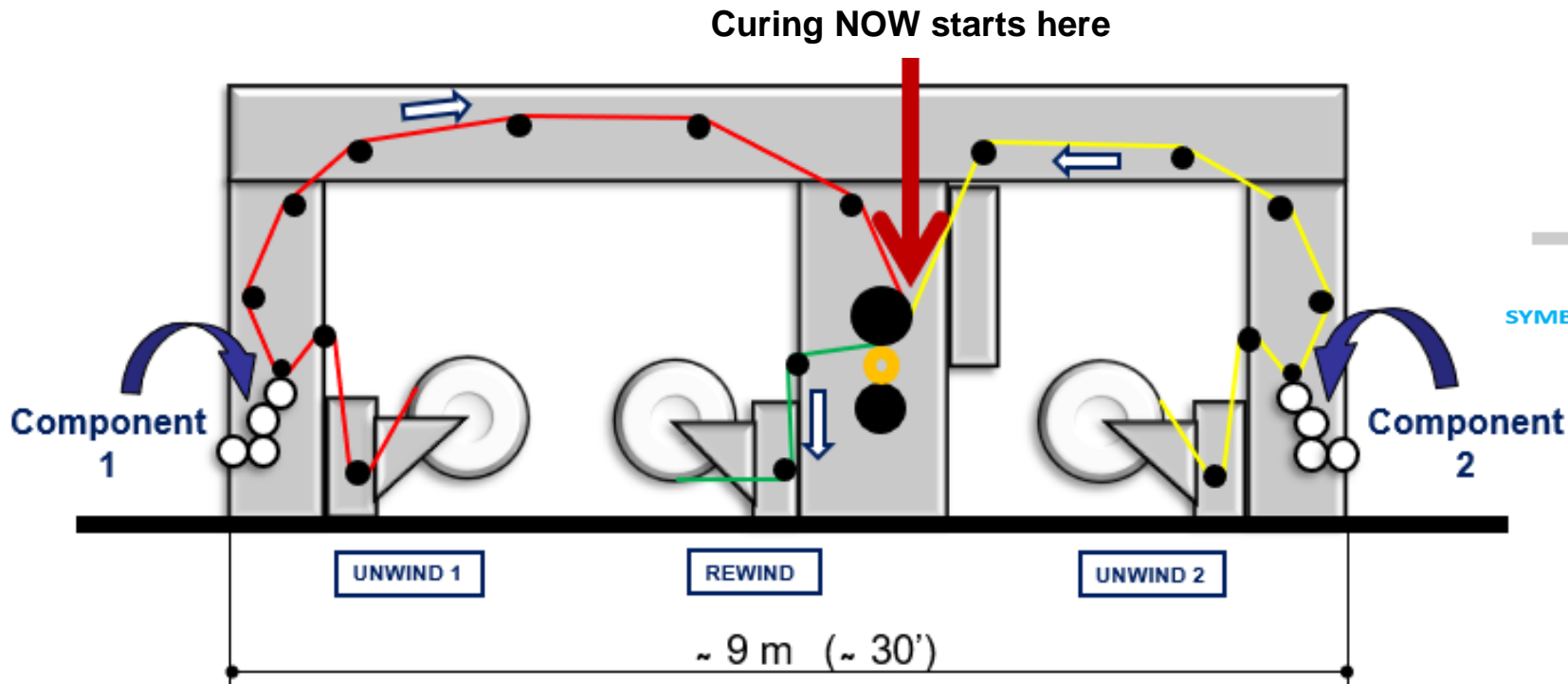
100% solids-conventional lamination

- Two-part adhesive system is mixed and pumped using a mix meter dispense unit
- Adhesive system has a specific pot life
- Harder to process, changes in appearance and thickness on the web, cleaning issues



SYMBIEX™ Technology Approach

- Each component is now pumped separately from the drum
- Pot life eliminated
- Components merge at the lamination nip under pressure to start the curing process
- Moving the reaction from metering to lamination nip



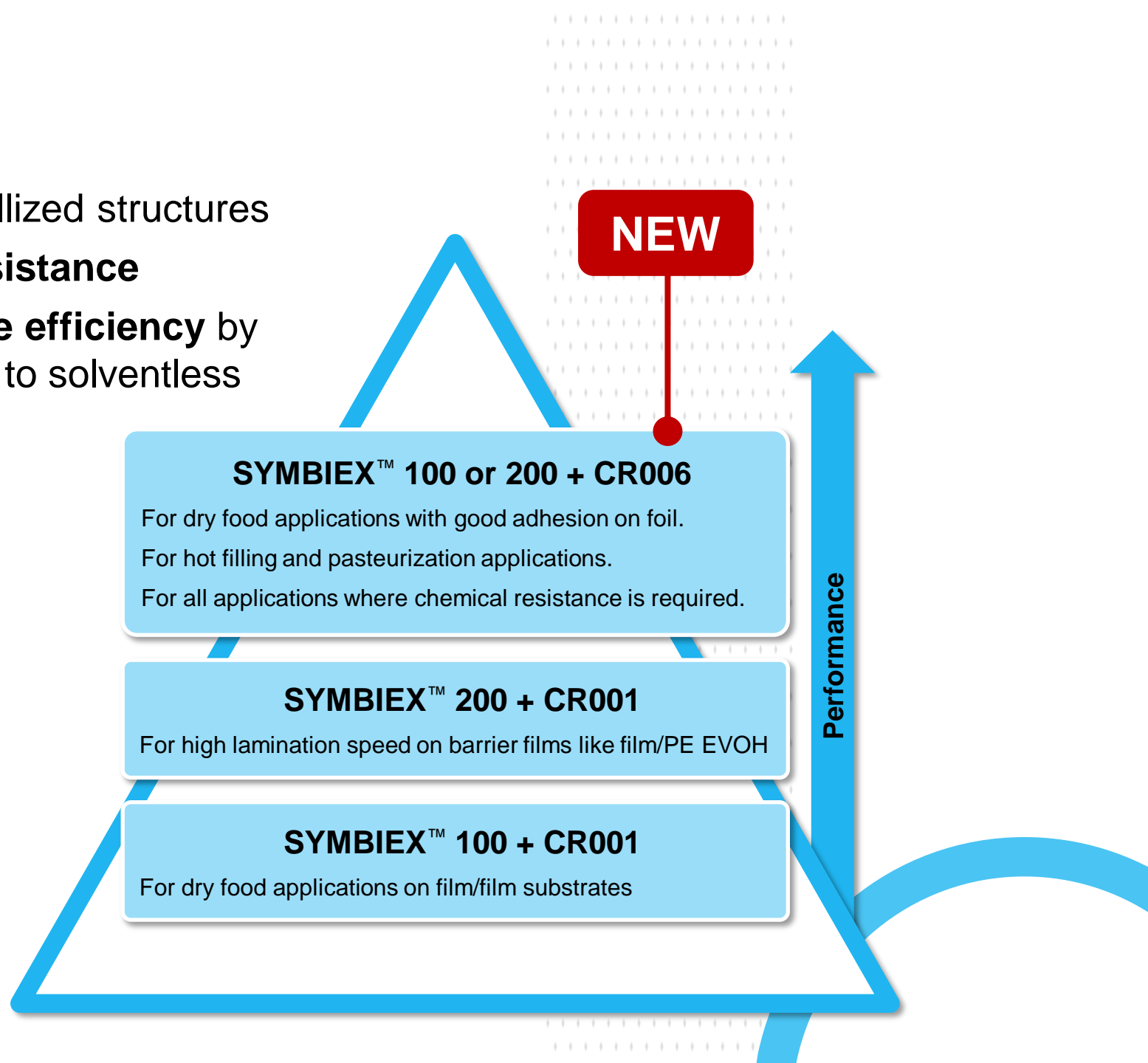


- No mixing unit
- Cleaning only once per shift
- Less wear on the rollers
- Better mix ratio management
- No manual gap adjustment
- Slit in 90 minutes
- Pouch within 12-24 hours
- FDA/EU compliant at 2 day

DuplexSL 1Shot



- **Improved adhesion** on foil and metallized structures
- **Improved thermal and chemical resistance**
- Enabling **sustainability** and **resource efficiency** by allowing to switch from solvent based to solventless



SYMBIEX™ 100 or 200 + CR006

For dry food applications with good adhesion on foil.
For hot filling and pasteurization applications.
For all applications where chemical resistance is required.

SYMBIEX™ 200 + CR001

For high lamination speed on barrier films like film/PE EVOH

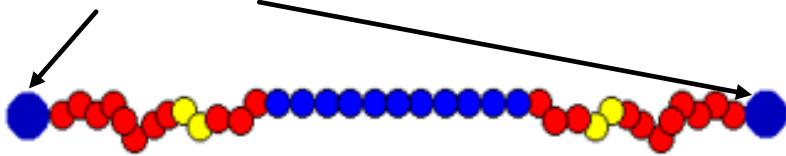
SYMBIEX™ 100 + CR001

For dry food applications on film/film substrates

Technology Approach

Isocyanates

- Functional Group (-NCO)
 - “Isocyanate” Group
 - $-N=C=O$



FILM

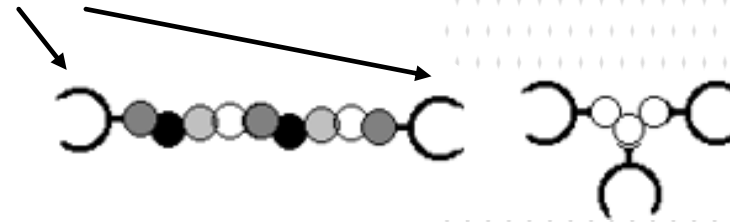
SYMBIEX™ 100/CR006

FILM

Utilizes solventless adhesive chemistry with a specially designed adhesive backbone

Polyols

- Functional Group (-OH)
 - “Hydroxyl” Group
 - $-O-H$



SYMBIEX™ New Generation



Snacks



Fresh Food and Dairy



Meat Packaging



Coffee and Powder Vacuum Packs



Paper Packaging



Cheese Packaging

NEW

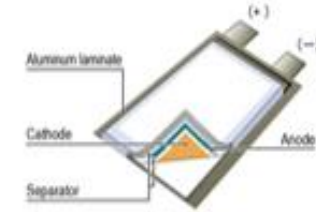


SUPs, Sachets and Portion Packs



Wet Wipes, Detergents

NEW

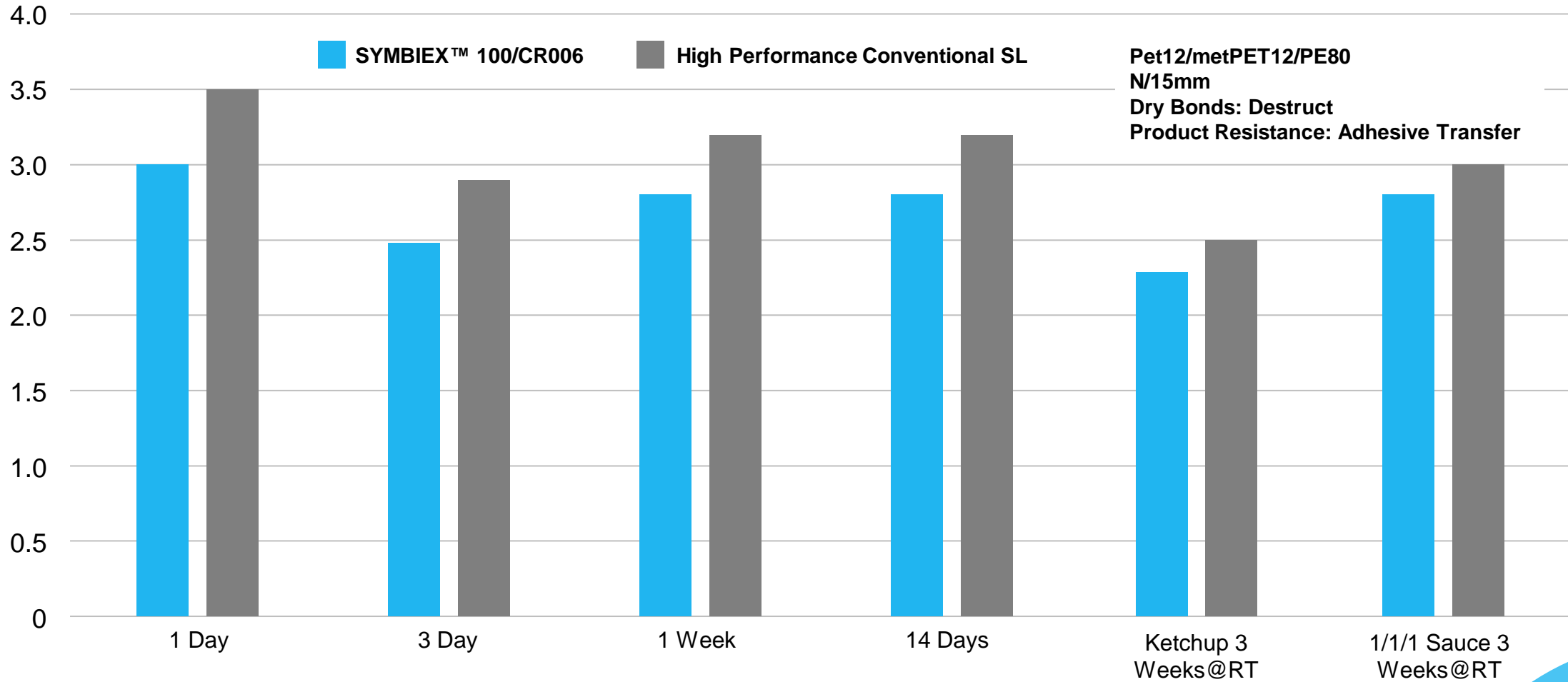


Industrial



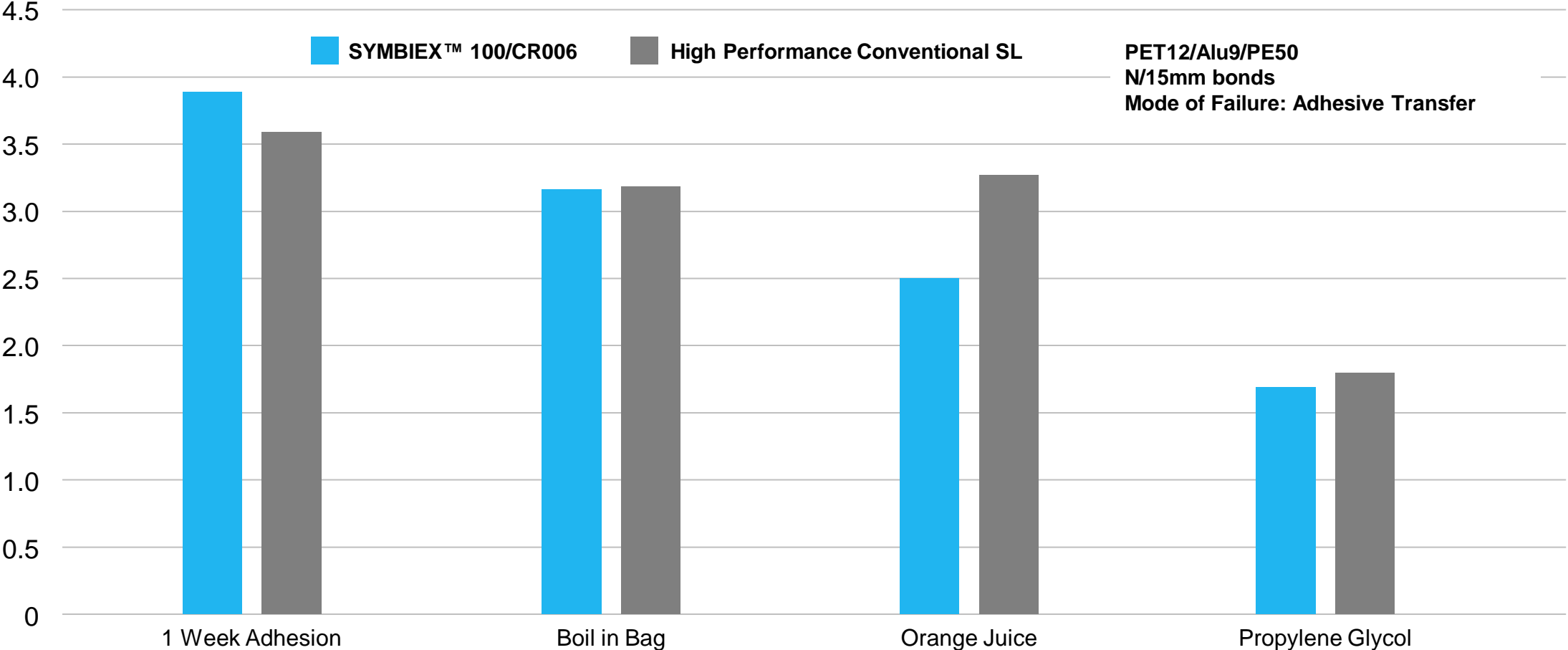
Thermoformed, Blister Packs

Metalized Film Adhesion Data



- Adhesion consistent with high performance solventless adhesive
- Improved processing time, line speed, and reduction in slit time

ALU Foil Adhesion Data



- Adhesion consistent with high performance solventless adhesive
- Improved processing time, line speed, and reduction in slit time

SYMBIEX™ CR006 Lamination Speeds

Laminate	SYMBIEX™ fpm
BOPP printed// BoPP	1300-1400
PET printed // PE	1300-1400
OPA printed // PE	1300-1400
BOPP printed// Met. PP	1100-1300
BOPP printed // met. PET	1000-1200
PET printed or unprinted // Alu	800-900
PET printed or unprinted // met. PET	900-1000
OPA //PE-EVOH	900-1000

* at 90°C application temp.



Source: Dow



Seek

Together™