



# Packaging lamination redefined in 90 minutes

## SYMBIEX™ Solventless Adhesives technology

SYMBIEX™ 100 / SYMBIEX™ CR 001 adhesives are a breakthrough 100 percent solid, polyurethane adhesive system suitable for a wide range of food and specialty packaging applications requiring general to medium performance.

Based on the revolutionary high-reactivity SYMBIEX™ Solventless Adhesives technology, SYMBIEX™ 100 / SYMBIEX™ CR 001 adhesives will simplify your lamination process, make it flexible as never before, and allow you to accelerate packaging innovation into the value chain.

The new lamination technology is a result of a joint development effort, combining Dow's adhesive development expertise with Nordmeccanica's machine pioneering.

### Typical applications

SYMBIEX™ 100 / SYMBIEX™ CR 001 adhesives are suitable for a variety of food packaging applications, including:

- Ready meals packaging
- Juice SUPs
- Sachets, portion packs and pouches
- Coffee and powder vacuum packs
- Fresh food and dairy packaging
- Snacks



Your benefits		
Shorter time-to-market	Improved production efficiency	Lower cost-in-use
<p>Slitting in 90 minutes</p>	<p>High web speed</p>	<p>Reduced line downtime</p>
<p>Form a package in less than 1 day</p>	<p>No <b>Misting</b> and Better <b>Wettability</b></p>	<p>Reduced <b>curing inventory</b></p>
<p>PAA decay in 1 day</p>	<p>No <b>pot life</b> concerns</p>	<p>Almost immediate <b>quality check</b></p>

Figure 1: Bond strength development

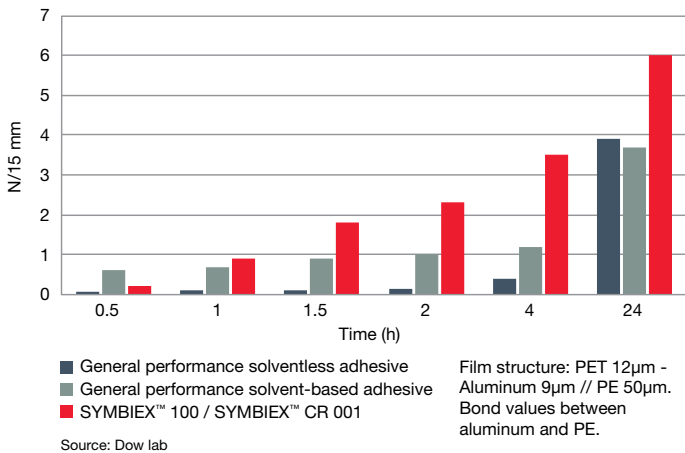
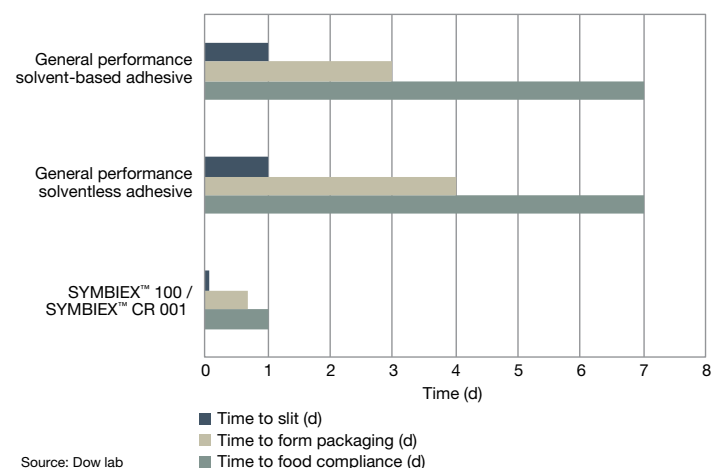
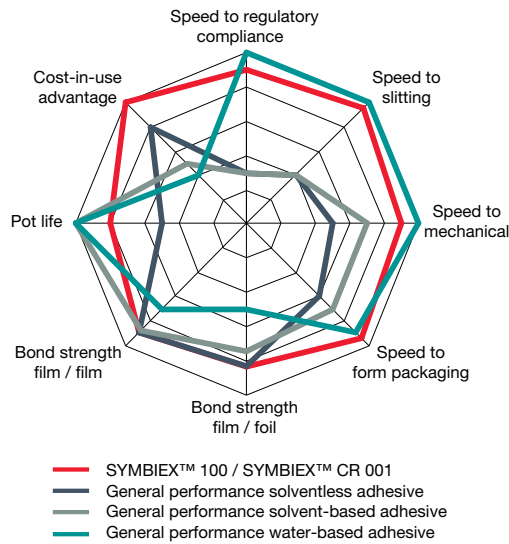


Figure 2: Outstanding curing performance



**Figure 3:** Overall performance: SYMBIEX™ 100 / SYMBIEX™ CR 001



Source: Dow lab

**Table 1:** SYMBIEX™ Solventless Adhesives technology properties

Process recommendations	
Application temperature	40-50°C
Viscosity SYMBIEX™ 100 (45°C)	1000-2000 mPa.s
Viscosity SYMBIEX™ CR 001 (45°C)	1000-2000 mPa.s
Cure time / temperature	1-2 days at 25°C
Room temperature curing	√
Maximum line speed	>400 mpm
Metal adhesion	Excellent
Time to slit	1.5 hours
Ease of clean up	Excellent
Thermal resistance	Good
Applications	General to medium performance triplex for dry goods moderate chemical resistance

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