

T. I. P. #15: **Calon Adhesion Build**

When adhesive first makes contact with a surface the level of bond or stickiness is called "tack". As time passes or pressure is exerted the adhesive flows onto, and makes complete surface contact on the sign substrate it achieves "ultimate adhesion". The difference between tack and ultimate adhesion is substantial. In fact ultimate adhesion can be over 400% greater than tack when film is applied with the standard method (squeegee + elbow grease). Knowing how to adjust the level of tack and understanding the rate at which bond levels rise will make applications much easier and allow bubble and trouble free sign installations.

IMPORTANT FACTS:

Bond increase is due to increased surface contact attained through the flow of the adhesive layer. At the time of application, "tack" is about 2.2 lb. per inch width (1 kg/2.5 cm). The bond may build to more than double after 1 day. In 7 days, ultimate adhesion may reach over 9 lbs per inch.

If film needs to be deformed (stretched) to achieve contact, using heat while installing will significantly increase initial contact and reduce problems during the service life.

Special films have been developed to have lower tack or slower adhesion build due to the application requirements for specific signage. Series 6000 has low tack for improving installation of large graphics which need constant repositioning. Translucent 2500 has a slow build adhesive which allows thermoformers the opportunity of removing areas of film from the sign face for several days after application and forming.

TIP'S FOR USING ADHESION BUILD RATE TO YOUR ADVANTAGE:

- Leave application paper on sign face as long as practical before removal.
- Use heat to increase rate of bond build when a sign must immediately go into cold weather service, especially on vehicles.
- Use narrow overlapping application strokes with the squeegee and apply uniform, high pressure across the entire sign face.
- Rivet brushes are a must on highly textured sign substrates; surface contact is increased by as much as 200 percent if compared to using a flat squeegee.
- When using wet application techniques, wait as long as possible to remove application paper; in addition, lightly wet the application tape (paper types only) and peel back at a very low angle.
- Never attempt to use heat to soften film in combination with wet application.
- Certain application fluids actually increase low temperature tack, examples are "QuickStick" (U.S.) and "Vinylube" (Australia).