



## **SECTION-F, LAMINATION TIPS**

### **LAMINATION TIPS**

The following are recommended in order to ensure the longest possible life for your laminated work:

- 1) Ensure printed matter is allowed to cure or dry for a minimum of 1 hour before applying over-lamination. High relative humidity (60 - 80%) will increase the dry time and minimum cure time of 24 hours is recommended.
- 2) Cold or pressure sensitive lamination should be allowed to set a minimum of 1 hour. This allows the adhesive to set-up before handling and stressing the laminated piece. As with drying time, longer is better. The longer an adhesive is allowed to set-up the stronger the bond.
- 3) Encapsulation as opposed to lamination of only the front of the printed media is recommended when possible. Encapsulation provides adhesive to adhesive bonding and is not solely dependent upon adhesion to the ink or substrate coating. Further adhesive to adhesive provides a true seal; edge trimmed, single side lamination does not.
- 4) If encapsulation is not possible, design a graphic where no ink bleed is at the edge of the piece. This allows a space for the lamination to adhere to the coated substrate and not to the ink. The higher the ink saturation at the edge of a piece, the more likely there will be adhesion failure due to ink delaminating.
- 5) Handling and shipping can also cause delaminating. Ensure when cutting any laminate that cutting blades are sharp. Dull blades cause a great deal of localized stress. When handling or for shipping do not fold or crease and if required, rolling should be to the maximum diameter allowed by the shipping container or carton. The larger the diameter allowed, the less stress.
- 6) Environmental stress, when possible, should be kept to a minimum. Extreme changes in temperature and humidity will affect a composite product. Over time any laminated product or composite piece may delaminate due to differences in the coefficient of expansion of materials.

Any laminated or composite piece will have its weakest point. It could be the substrate, the adhesion of the coating to the substrate, the adhesion of the ink to the coating, or any combination of these material or environmental factors. The key to ensure a long life for your laminated product is to know potential stresses beforehand and the best materials for a specific applications. Once delaminating begins it will continue as the piece continues to be stressed