



# Display Lamination Guidelines

## 9701, 9702, & 9703 Adhesives

### Calculate the Adhesive Amount Needed

- Measure the lamination width (W), length (L), and thickness (T) in cm.
- Calculate the adhesive volume using the formula,  $V = (W \times L \times T)$
- Calculate the adhesive weight using the formula, Adhesive Weight =  $(W \times L \times T)0.93$ .  
*Note: The density of 9701 or 9702 is about 0.93 g/ml.*
- For good lamination results, add 35% more adhesive to the total adhesive amount. The extra amount can be optimized by varying the adhesive dispensing patterns.
- Total Adhesive Amount =  $(W \times L \times T)0.93 \times 1.35$  gram

### Calculate UV Dose Needed for Cure

Check and calculate the percentage of UV blockage from the substrates. Adjust the required UV dose for curing the adhesive properly.

### Clean the Substrates

Use a clean air gun to remove any small particles on the substrates. Clean the substrates with a soft, IPA-soaked woven cloth.

### Create a Dam (if necessary)

Dispense 9703 adhesive around the perimeter of the screen to create a dam at the required width and thickness. (Figure 1)

Using a UV spot lamp or conveyor, partially cure the dam bead. The bead should be cured to a soft gasket. (Figure 2)

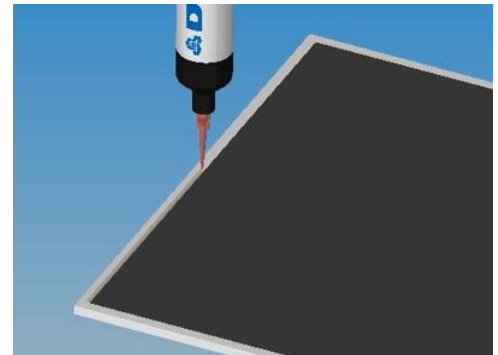


Figure 1. Dispense 9703 to Create a Dam

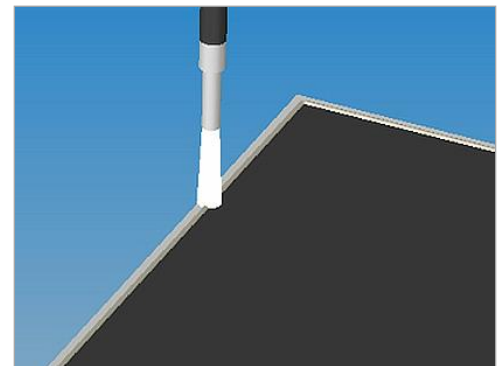


Figure 2. Partially Spot Cure Dam Bead

## Dispense the Adhesive

Level the screen to get even flow of adhesive on the surface.

Dispense the required amount of 9701 or 9702 adhesive onto the substrate. The adhesive should be dispensed in a pattern that will create a uniform layer of adhesive. Various dispensing patterns such as X shape, fish bone, circular, etc. should be developed based on the size of the screen. (Figure 3)

Wait a few minutes for the adhesive to self-spread. Once it has, carefully position the second panel. (Figure 4)

## Cure the Display Assembly

Once the adhesive covers the entire display surface, spot cure the four corners to lock the assembly and obtain proper alignment. (Figure 5)

If curing from both sides of the assembly is not an option, cure all four sides of the assembly prior to the final cure. This ensures that shadowed areas are also cured.

Place the display assembly into a UV-curing conveyor for the final cure. (Figure 6)

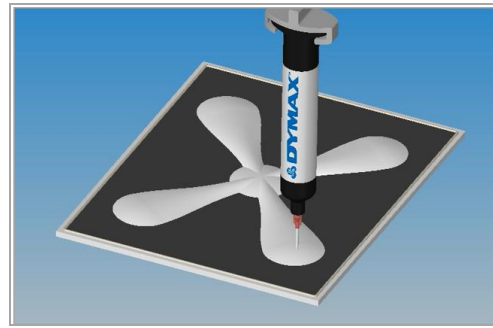


Figure 3. Apply Adhesive to First Panel

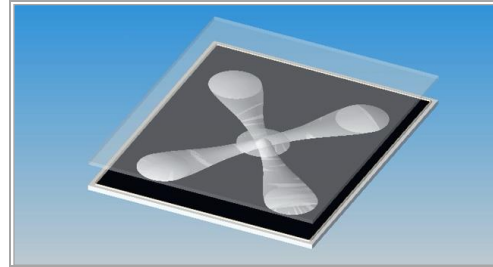


Figure 4. Position the Second Panel

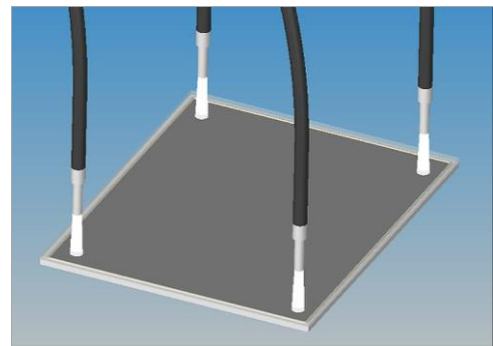


Figure 5. Spot Cure Four Corners

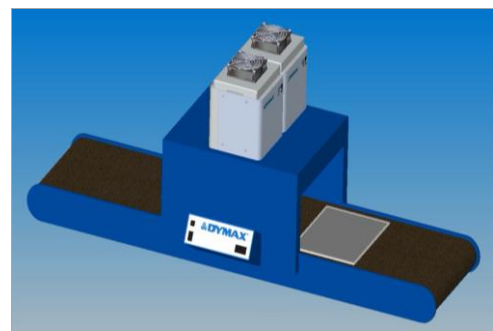


Figure 6. Cure with UV Conveyor