

**QUICK KNIFE ADHESION TEST FOR GLASS BONDING SYSTEMS****APPLICATION**

This procedure is used to describe a qualitative method of screening the adhesion of a primer and/or adhesive to paint, glass, or appropriate substrate.

REQUIRED EQUIPMENT

Quantity of 100 mm x 300 mm painted panels or appropriate substrate.
Specified primer for adhesion test. (If used)
Specified stationary glass bonding adhesive.
Paint brush.
Razor knife.
Timer.
Metric ruler.

TEST PROCEDURE

1. Brush apply the bonding primer, if required, to the center of the painted test panel, or other equivalent substrate (60 mm x 254 mm). Follow manufacturer's recommendations to achieve the specified dry film thickness.
2. Air dry primed panels for 30 minutes at 23 °C +/- 2 °C and 50% +/- 5% R.H. Record actual temperature and humidity.
3. Apply a 6 mm x 6 mm x 254 mm bead of the appropriate glass bonding adhesive to the center of the primed area. Allow the adhesive to air cure for 72 hours at 23 C +/- 2 °C and 50% +/- 5% R.H. or as specified, prior to subjecting the panels to the specified environments. Record actual temperature and relative humidity.
4. Subject the panels to the environmental test conditions.
5. After the environments, allow the panels a minimum of 12 hours recover time at room temperature, unless otherwise specified.
6. Starting at one end of the adhesive bead, cut the cured adhesive parallel to the panel as close as possible to the primed surface for approximately 50 mm.
7. Peel back the cut end of the adhesive bead at 150° angle while cutting through the edge of the bonded adhesive into the panel. The knife blade should be perpendicular to the panel surface. Perform 10 cuts on each sample with the distance between cuts being at least 12 mm. See figure 1.

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8. Examine the surface of the panel under the cured adhesive. Record the separation mode of the adhesive from the panel. See figure 2 for Failure Mode classification.
9. Measure the distance of layering separation from the cut line to the end of the separation (furthest point). Report the measurement in mm.

REPORT

Air dry temperature and R.H.
Cure temperature and R.H.
Layering separation distance.
Failure Mode.

KEY WORDS

Glass Bonding
Quick Knife

FIGURE 1

