

# Adhesion (Room Temperature)

—TEST NO. TP05—

## I. Scope

This test procedure evaluates the adhesion of the paint/polymer system to the substrate used for the Texture Plus® system.

## **II. Materials and Equipment**

- **a.** Cutting tool, (Gardner PA 2000 or equal) with six teeth and 2.0mm blade.
- **b.** Texture Plus® production coated parts with barrier coat and top coat.
- **c.** Scotch cellophane tape # 600 1" wide.
- d. Kleenex or equal.
- **e.** Rubber eraser on the end of a pencil.

## III. Procedure

**a.** Age finished parts for 1 week at room temperature (77 degrees F)

**b.** Make two cuts with cutting tool at right angles to each other, approximately 1.5 inches long on

each test part to be evaluated. The second cut should be made on top of the first cut forming 25

small squares. When cutting, cut through the film to the substrate in one steady motion.

**c.** Brush the test area lightly with a Kleenex to remove any detached pieces or ribbons of coating.

**d.** Press the center of about 3 inch long tape over the cross hatched area at about 45 degree angle.

**e.** Rub the tape with the pencil eraser to make sure the tape to painted film has total contact.

**f.** Within one minute, remove the tape with a rapid pull (not jerked) back upon itself as close to a 180 degree angle as possible.

**g.** Visually inspect the test specimen without magnification and compare results to the adhesion guide, see Figure 1.





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### (Continued...)

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Classification	Surface of cross-cut area from which flaking has occurred. (Example for six parallel cuts)
5	Nane
	###
,	###
2	
1	

#### Figure 1 Classification of Adhesion Test Results

5. The edges of the cuts are completely smooth: none of the squares

of the lattice is detached.

4. Small flakes of the coating are detached at intersections:

Less the 5% of the area is affected.

3. Small flakes of the coating are detached along the edges and

at intersections of cuts. The area affected is 5 to 15% of the

lattice.

2. The coating has flaked along the edges and on parts of the squares.

The area affected is 15 to 35% of the lattice.

1 The coating has flaked along the edges of cuts in large ribbons and whole squares have detached. The area affected is 35 to 65% of the lattice.

0 Flaking and detachment are worse than Grade 1.

## **IV. Report**

**a.** Report the rating that best matches the adhesion guide.

**b.** A rating of 3 or better is acceptable. Inter-coat adhesion loss or adhesion to substrate loss of 2 or worse is cause for rejection.

c. Compare test results to Texture Plus® standard parts.

### V. Results

**a.** The parts tested received a Grade 5. The edges of the cuts are completely smooth; none of the squares of the lattice is detached.

